

MOSQUITO STUDIES (Diptera, Culicidae)

VI. MOSQUITOES ORIGINALLY DESCRIBED FROM

NORTH AMERICA¹

By

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INTRODUCTION

Although the mosquitoes of North America north of Mexico are relatively well known (Carpenter and LaCasse 1955), no attempt has been made to date to study the species comprising this complex fauna on a population basis. For such studies it is essential to determine the characteristics of all the stages of all the nominal species from the original type localities in order to provide nomenclatural stability. In connection with studies on the mosquitoes of Middle America (Belkin, Schick et al 1965) we have found that such topotypic material is lacking at present for most North American species reported from Middle America and that we cannot determine, therefore, the identity of these species. It is very probable that there are still a number of nominal North American species incorrectly synonymized at the present time, primarily owing to the lack of topotypic material of all stages.

In the present paper we have compiled all the available data about the source of the original type material for all the nominal species described from North America. We hope that this information will be useful to other workers wishing to obtain topotypic material and will encourage taxonomic studies on a population level. Collecting methods and the type and quantity of topotypic material suitable for taxonomic purposes have been discussed in two previous publications (Belkin, Hogue et al 1965; Belkin, Schick and Heinemann 1965: 2).

We thank Alan Stone for allowing us to publish herein his lectotype selections in the Chaoborinae and for providing data on type specimens deposited in USNM.

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EXPLANATORY INFORMATION

LIST OF SPECIES. The list consists of all the nominal species, valid or currently considered as synonyms, arranged in the sequence followed for the families Culicidae and Chaoboridae (considered here as subfamilies) in "A catalog of the Diptera of North America" (Stone, Sabrosky et al 1965) except that nomina nuda are not included and subgenera have been raised to generic rank in the Chaoborinae. The Dixinae are not included as they will be covered fully in a forthcoming publication by Peters and Cook (1966). For subspecies and junior synonyms, the species or senior synonyms in the taxonomic treatment of the catalog are shown in [brackets]. A nominal species marked with an asterisk (*) is the type species of a generic group taxon. The citation of author, date and page refers to the bibliography in the catalog.

Under **TYPE**, all the available data pertaining to the type material are given as derived from the original descriptions and other published sources. Type specimens were not examined in the preparation of this paper and therefore in some instances the kind of type specimen(s) (holotype or syntypes) could not be determined; possibly some lectotype selections were missed. The number in parentheses following the sex or stage of the type(s) indicates the collection, rearing or slide number. In the statement of the type locality, [brackets] are used to inclose corrections and (parentheses) for counties (for U. S. A.). Dates of the type collections and names of collectors are given whenever they could be determined. At the end of the type data (enclosed in parentheses) is an indication of the type depository, abbreviated as in the catalog of mosquitoes (Stone, Knight and Starcke 1959), together with references to lectotype selections and other published data regarding the types.

Under **BIONOMICS**, all available data about the original collection are given directly, first for the immature stages and then for the adults. When no information was given in the original description for the immature stages, data are supplied in [brackets] from other sources. Such data should be used only as a general guide for locating the probable breeding sites.

LIST OF LOCALITIES: There are separate lists for Canada, Greenland and the United States. For Canada and the U. S. A. the lists are arranged alphabetically by province or state and within each of these, alphabetically by the specific locality (followed by county or parish for the U. S. A.). The number preceding the nominal species refers to the number assigned to it in the list of species.

RESTRICTIONS OF TYPE LOCALITIES

We take this opportunity to restrict the type localities of 10 species described by Fabricius, Robineau-Desvoidy, Say and Walker from the United States without indication of the State. This is done in accordance with Recommendation 72E of the International Code of Zoological Nomenclature and on the basis of the data specified in each case below. For several other species described from a State without precise locality it is suggested that a restriction of the type locality be made when reared material becomes available. In order to insure stability and to preserve current taxonomic interpretation of important species it will be necessary to designate neotypes for several species whose types are not extant.

12. Anopheles (A.) punctipennis (Say, 1823: 9). In the original description

it is stated first "Inhabits the United States" but in the discussion following Say adds "it is common on the Mississippi, and is troublesome to travellers" and "I observed this species in considerable numbers on the Eastern shore of Maryland." Later, Say (1824: 357) stated that he described punctipennis in 1819. This might be interpreted to indicate that he described this species some time during the Long Expedition to the Rocky Mountains while he was away from Philadelphia from early 1819 to late 1820 (James 1823) and that he had before him only material from the Mississippi. However, it is possible that he described the species in Philadelphia before the expedition and added to the description upon his return. Since there is no material extant and there is no way of determining exactly the specimens in Say's hands at the time of the description one must rely on the statements in the original published description and consider that the type material came from both the Mississippi and Maryland. On this basis we restrict the type locality of punctipennis to the vicinity of Chestertown, Kent Co., Maryland where this species, as currently interpreted, was collected by Bishopp, Cory and Stone (1933). Since it appears that "punctipennis" may be a polytypic species or a sibling complex (Bellamy, 1956) it is very important to designate a neotype from this locality to preserve the current usage.

14. Anopheles (A.) quadrimaculatus Say, 1824a: 356. No type material is extant. Say's original description states "Inhabits North-west Territory." The material was collected on Long's Second Expedition (Keating 1824) and it is most likely that it was obtained between 25 June and 2 July 1823 between Prairie du Chien (Wisconsin) and Fort Anthony [Fort Snelling] (Minnesota) while Say was in command of the party which ascended the Mississippi by barge. This is also the only area in the Northwest Territory of that period where quadrimaculatus, as currently interpreted, is common. Accordingly, we are restricting the type locality of this species to the vicinity of Wabasha, Minnesota where quadrimaculatus has been reported to be very abundant (Daggy, Muegge and Riley 1940). A neotype for this important species should be designated from this locality as soon as possible to insure the preservation of this name in the current usage.

24. Mansonia (C.) perturbans (Walker, 1856b: 428); 39. Psorophora (P.) conterrens (Walker, 1856b: 427); 136. Aedes (O.) sollicitans (Walker, 1856b: 427); 198. Culex (N.) territans Walker, 1856b: 428. All 4 species were described by Walker from the "United States", all but territans are represented by type specimens at the British Museum and there is general agreement at present as to the taxonomic interpretation of all of them. Since these species were described at the same time we consider probable that they were collected by one individual in one locality. Such an assemblage of species is encountered commonly now along the Atlantic coastal plain from New England to Texas. We believe that the most likely locality for Walker's specimens was one of the major centers along the Atlantic seaboard and therefore restrict the type locality of all 4 species to the vicinity of Charleston, South Carolina. This locality is also near the center of the known distributions of these species along the Atlantic coastal plain.

35. Psorophora (P.) ciliata (Fabricius, 1794: 401); 38. Psorophora (P.) boscii Robineau-Desvoidy, 1827: 413. The types of both nominal species (currently synonymized) are not extant but are indicated in the original descriptions to have come from "Habitat in Carolina Mus. Dom. Bosc" (ciliata) and "Habitat in Carolina (Musaeum D. Bosc)" (boscii). This material was undoubtedly collected by Louis Auguste Guillaume Bosc d'Antic who was in the

United States from 1798 to 1800 and stayed, at least part of this period, at the gardens of André Michaux (Cuvier 1829: 81-82) whose remnants may still exist in Ten Mile near Charleston, South Carolina (Coker 1911). The type locality of both these species can be restricted therefore to the vicinity of Ten Mile Station, Charleston Co., South Carolina.

37. Psorophora (P.) rubida (Robineau-Desvoidy, 1827: 404). The origin of the nonextant type of Robineau-Desvoidy's species was indicated as "Habitat in Carolina . . . (Musaeum D. Serville)." The Serville referred to is probably Jean Guillaume Audinet-Serville who as a young man was a protégé of Mme de Tigny and became associated through her with Olivier, Latreille, Bosc and other outstanding French naturalists of that period (Amyot 1858: 346). Audinet-Serville never visited the United States and it is likely that the above mentioned material came into his possession either from Bosc or from the Palisot de Beauvois collection. Bosc is reported to have been extremely generous with his American collection (Cuvier 1829: 82-83) and may have given some of his material to Audinet-Serville when the latter was entrusted by Latreille to finish the work of Palisot de Beauvois (1805-1821) on the insects collected in Africa and America. In either case this material is likely to have been collected in the Michaux gardens, Ten Mile near Charleston, South Carolina, where it is known Bosc spent considerable time (Cuvier 1829: 81-82) and which was also visited by Palisot de Beauvois (Ewan 1957: 24). Therefore, we are restricting the type locality of this species to the vicinity of Ten Mile Station, Charleston Co., South Carolina (see also above under 35. Psorophora (P.) ciliata).

38. Psorophora (P.) boscii Robineau-Desvoidy, 1827: 413. Type locality restricted to vicinity of Ten Mile Station, Charleston Co., South Carolina. For explanation see under 35. Psorophora (P.) ciliata.

39. Psorophora (P.) conterrens (Walker, 1856b: 427). Type locality restricted to vicinity of Charleston, South Carolina. For explanation see under 24. Mansonia (C.) perturbans.

136. Aedes (O.) sollicitans (Walker, 1856b: 427). Type locality restricted to vicinity of Charleston, South Carolina. For explanation see under 24. Mansonia (C.) perturbans.

198. Culex (N.) territans Walker, 1856b: 428. Type locality restricted to vicinity of Charleston, South Carolina. For explanation see under 24. Mansonia (C.) perturbans.

208. Culex (C.) quinquefasciatus Say, 1823: 10. We agree with Stone (1957: 342-343) that this species is a senior synonym of Culex fatigans Wiedemann, 1828: 10 and Anopheles ferruginosus Wiedemann 1828: 12. The only statement in the original paper which might contradict this interpretation is "We found them in great numbers on the Mississippi in May and June." Say travelled on the Mississippi from the mouth of the Ohio River on 30 May 1819 to St. Louis where he remained until 21 June 1819 (James 1823). Ross (1947) states that quinquefasciatus does not appear in numbers in light trap collections in southern Illinois until July or August but records adults as early as 17 June. In this area at this time of the year Culex pipiens is much more abundant than quinquefasciatus and it is probable that Say observed both species or that he even may have included Aedes vexans in his biological notes. On the other hand it is quite possible that Say's description was based on specimens collected later when he returned from the Long expedition at about the middle of October 1820 by boat on the Mississippi River to New Orleans (Long in James 1823: 197). This view is supported by the fact that the type locality of

ferruginosus, which was based on specimens identified as quinquefasciatus by Say, is stated to be New Orleans. We prefer this interpretation and therefore restrict to type locality of quinquefasciatus to the vicinity of New Orleans (Orleans Par.), Louisiana.

LIST OF SPECIES

Culicinae

1. Anopheles (A.) atropos Dyar & Knab, 1906b: 160. TYPE: Lectotype ♀, Florida Keys (Monroe Co.), Florida, Hiram Byrd (USNM, 10029; selection of Stone and Knight 1956b: 276). BIONOMICS: [Larvae in pools in permanent brackish and saltwater marshes, often in very shallow pools].

*2. Anopheles (A.) barberi Coquillett, 1903e: 310. TYPE: Holotype ♀, Plummer's Island (Montgomery Co.), Maryland, 17 Aug 1903, H. S. Barber (USNM, 6959). BIONOMICS: [Larvae in treeholes and occasionally in artificial containers].

3. Anopheles (A.) bradleyi King, 1939: 468. TYPE: Holotype ♀ with associated larval and pupal skins, near St. Johns River (Brevard Co.), Florida, 5 Feb 1938, T. E. McNeel (USNM). BIONOMICS: Larvae in roadside ditch containing Chara, near river.

4. Anopheles (A.) crucians Wiedemann, 1828: 12. TYPE: Adults, Pennsylvania and New Orleans (Orleans Par.), Louisiana (NMW). BIONOMICS: [Larvae in springs, ponds, lakes, swamps, and semipermanent and permanent pools, usually shaded and with vegetation].

5. Anopheles (A.) earlei Vargas, 1943: 9. TYPE: Holotype ♂ with dissected genitalia on 2 slides, Jefferson Co., Wisconsin, 10 July (USNM). BIONOMICS: [Larvae usually in cold clear water in shallow margins of semipermanent and permanent ponds overgrown with emergent and floating vegetation].

6. Anopheles (A.) freeborni Aitken, 1939: 192. TYPE: Holotype ♂ (4889), Davis (Yolo Co.), California, 6 Nov 1937, T.H.G. Aitken (CAS). BIONOMICS: [Larvae in clear seepage water, in roadside pools, in rice fields and similar habitats].

7. Anopheles (A.) georgianus King, 1939: 462. TYPE: Holotype ♀ with associated larval and pupal skins, near Quitman (Brooks Co.), Georgia, 16 Feb 1938, R. E. Bellamy and W. V. King (USNM). BIONOMICS: Larvae in hoof prints and small pot holes in seepage area at head of small stream.

8. Anopheles (A.) occidentalis Dyar & Knab, 1906b: 159. TYPE: Holotype ♀, Stanford University (Santa Clara Co.), California, 26 May 1903, Isabel McCracken (USNM, 10028). BIONOMICS: [Larvae in permanent pools, hillside seepages, lagoons, quiet streams and similar habitats].

9. Anopheles (A.) perplexens Ludlow, 1907: 267. TYPE: Holotype ♀, Camp Roosevelt, Mt. Gretna (Lebanon Co.), Pennsylvania, 25 Aug 1906, E.B. Whittemore (USNM). BIONOMICS: [Larvae probably in limestone springs and margins of streams emerging from them].

10. Anopheles (A.) franciscanus McCracken, 1904: 12 [= ssp. of pseudopunctipennis]. TYPE: Lectotype ♂ (456-1), genitalia slide missing, Stanford University (Santa Clara Co.), California, 5 May 1903 (Los Angeles County Museum; selection of Aitken 1945: 329). BIONOMICS: [Larvae in shallow pools and along margins of receding streams, usually in full sun and with mats of green algae].

11. Anopheles (A.) boydi Vargas, 1939: 361 [= franciscanus]. TYPE: Eggs, Central California (NE). BIONOMICS: [As for franciscanus].
12. Anopheles (A.) punctipennis (Say, 1823: 9). TYPE: Adult, United States [Locality restricted to vicinity of Chestertown (Kent Co.), Maryland] (NE). BIONOMICS: [Larvae in wide variety of ground waters but with preference for shaded, cool, clear water, particularly in hill streams].
13. Anopheles (A.) hyemalis (Fitch, 1847: 281) [= punctipennis]. TYPE: Syntypes ♂, ♀, Eastern New York, late autumn and early spring (LU). BIONOMICS: [As for punctipennis].
14. Anopheles (A.) quadrimaculatus Say, 1824a: 356. TYPE: ♀, Northwest Territory [Restricted to vicinity of Wabasha (Wabasha Co.), Minnesota] (NE). BIONOMICS: [Larvae most common in clear, exposed or partially shaded, freshwater pools, ponds, lakes, lagoons or swamps and in dense aquatic vegetation along margins of large slow-flowing rivers].
15. Anopheles (A.) annulimanus van der Wulp, 1867: 129 [= quadrimaculatus]. TYPE: ♂, Wisconsin (LU). BIONOMICS: [As for quadrimaculatus].
16. Anopheles (A.) walkeri Theobald, 1901a: 199. TYPE: ♀, Lake Simcoe (Simcoe Co.), Ontario, Sept, E. M. Walker (BM). BIONOMICS: [Larvae in freshwater marshes containing emergent or floating vegetation or debris]. Specimens taken from beds of reeds close to low marshy shore of lake.
17. Toxorhynchites (Lynchiella) rutilus (Coquillett, 1896a: 44). TYPE: Lectotype ♂, Georgiana (Brevard Co.), Florida (USNM, 903; selection of Stone and Knight 1957c: 199). BIONOMICS: [Larvae in treeholes, less often in artificial containers and arboreal bromeliads (Tillandsia utriculata)].
18. Toxorhynchites (L.) septentrionalis (Dyar & Knab, 1906d: 249) [= ssp. of rutilus]. TYPE: Holotype ♂, Woodstock (Shenandoah Co.), Virginia, 24 Aug 1904, F. C. Pratt (USNM, 9952). BIONOMICS: [Larvae in treeholes and artificial containers].
19. Toxorhynchites (L.) herrickii (Theobald, 1906: 241) [= septentrionalis]. TYPE: ♂, [probably Agricultural College], Mississippi, Sept 1906, Glenn Herrick (NE). BIONOMICS: Larvae carnivorous, in cavity of iron post supporting water tank.
20. Wyeomyia (W.) haynei Dodge, 1947: 118. TYPE: Holotype ♂, Lexington Co., 8.2 mi SW of Columbia, near the Watling Road, between the Columbia Air Base and U.S. Highway No. 1, South Carolina, Apr 1945, O. L. Cartwright (USNM). BIONOMICS: Larvae in pitchers of Sarracenia purpurea venosa.
21. Wyeomyia (W.) antoinetta Dyar & Knab, 1909b: 263 [= mitchellii]. TYPE: Holotype ♂, Estero (Lee Co.), Florida, May 1906, J. B. Van Duzee (USNM, 12197). BIONOMICS: Bred from larva in epiphytic bromeliad, in association with W. vanduzeei.
- *22. Wyeomyia (W.) smithii (Coquillett, 1901a: 260). TYPE: Holotype ♀, Lahaway (Ocean Co.), New Jersey, Mar-Apr, J. B. Smith (USNM, 5799). BIONOMICS: [Larvae in pitchers of Sarracenia purpurea].
23. Wyeomyia (W.) vanduzeei Dyar & Knab, 1906a: 138. TYPE: Lectotype ♂ (356.5) with genitalia slide (349), Estero (Lee Co.), Florida, 22 Apr or 6 May 1906, J. B. Van Duzee (USNM, 9988; selection of Stone and Knight 1957b: 126). BIONOMICS: Bred from larvae in epiphytic bromeliad.
- *24. Mansonia (Coquillettidia) perturbans (Walker, 1856b: 428). TYPE: ♀, United States [Restricted to vicinity of Charleston (Charleston Co.), South Carolina] (BM). BIONOMICS: [Larvae attached to submerged roots and stems of aquatic vegetation in ponds and swamps].

25. Mansonia (C.) testacea (van der Wulp, 1867: 128) [= perturbans].
TYPE: ♂, Wisconsin (LM). BIONOMICS: [As for perturbans].

26. Mansonia (C.) ochropus (Dyar & Knab, 1907a: 100) [= perturbans].
TYPE: Holotype ♀, Center Harbor (Belknap Co.), New Hampshire, 19 July 1902, H. G. Dyar (USNM, 10261). BIONOMICS: [As for perturbans]. Female taken while flying in woods during daytime.

27. Uranotaenia anhydor Dyar, 1907: 128. TYPE: Holotype larva, Sweet-water Junction, near San Diego (San Diego Co.), California, 2 June 1906, H. G. Dyar and A. N. Caudell (NE). BIONOMICS: Larva in temporary swamp full of reeds, associated with Anopheles pseudopunctipennis, A. occidentalis, Culex tarsalis and C. erythrothorax.

28. Uranotaenia syntheta Dyar & Shannon, 1924a: 189 [= ssp. of anhydor].
TYPE: Holotype ♀, Mission (Hidalgo Co.), Texas, 15 Apr 1924, R. L. Turner (USNM). BIONOMICS: [Larvae in still water along margin of shallow grassy ditch and in small depressions along stream with mats of water hyacinths].

29. Uranotaenia continentalis Dyar & Knab, 1906c: 187 [= lowii]. TYPE: Larvae, Baton Rouge (East Baton Rouge Par.), Louisiana, 6-9 Sept and 23 Oct 1904, J. W. Dupree (LU). BIONOMICS: [Larvae in grassy shallow margins of ponds and lakes, usually exposed to sunlight].

30. Uranotaenia sapphirina (Osten Sacken, 1868: 47). TYPE: ♂, ♀, Washington, District of Columbia and Brooklyn, New York, Brevoort (MCZ). BIONOMICS: [Larvae in permanent pools, ponds and lakes that contain emergent and floating vegetation exposed to sunlight].

31. Uranotaenia coquilletti Dyar & Knab, 1906c: 187 [= sapphirina].
TYPE: Larva, [Baton Rouge (East Baton Rouge Par.), Louisiana], J. W. Dupree (LU). BIONOMICS: [As for sapphirina].

32. Orthopodomyia alba Baker, 1936: 1. TYPE: Holotype ♂ with associated larval and pupal skins, Ithaca (Tompkins Co.), New York, summer 1934, F. C. Baker (USNM, 51387). BIONOMICS: Bred from larvae in rotholes of elm and maple.

33. Orthopodomyia californica Bohart, 1950: 399. TYPE: Holotype ♀ with associated larval and pupal skins, Elkhorn Ferry, near Sacramento (Yolo Co.), California, 12 Apr 1948, R. M. Bohart (USNM). BIONOMICS: Larvae in cottonwood treehole.

*34. Orthopodomyia signifera (Coquillett, 1896a: 43). TYPE: Holotype ♀, Washington, District of Columbia, June, D. W. Coquillett (USNM). BIONOMICS: [Larvae in treeholes].

*35. Psorophora (Psorophora) ciliata (Fabricius, 1794: 401). TYPE: Adult, "Habitat in Carolina. Mus. Dom. Bosc." [Restricted to vicinity of Ten Mile Station (Charleston Co.), South Carolina] (NE). BIONOMICS: [Larvae in temporary, unshaded rain pools].

36. Psorophora (P.) molesta (Wiedemann, 1820a: 7) [= ciliata]. TYPE: Adult, Georgia (NE). BIONOMICS: [As for ciliata].

37. Psorophora (P.) rubida (Robineau-Desvoidy, 1827: 404) [= ciliata].
TYPE: ♀, "Habitat in Carolina . . . (Musaeum D. Serville.)" [Restricted to vicinity of Ten Mile Station (Charleston Co.), South Carolina] (NE). BIONOMICS: [As for ciliata].

38. Psorophora (P.) boscii Robineau-Desvoidy, 1827: 413 [= ciliata].
TYPE: Adult, "Habitat in Carolina. (Musaeum D. Bosc.)" [Restricted to vicinity of Ten Mile Station (Charleston Co.), South Carolina] (NE). BIONOMICS: [As for ciliata].

39. Psorophora (P.) conterrens (Walker, 1856b: 427) [= ciliata]. TYPE: ♀, United States [Restricted to vicinity of Charleston (Charleston Co.), South Carolina] (BM). BIONOMICS: [As for ciliata].
40. Psorophora (P.) ctites Dyar, 1918c: 126 [= ciliata]. TYPE: Lectotype ♀, Brownsville (Cameron Co.), Texas, 28 Aug 1916, M. M. High (USNM, 21717; selection of Stone and Knight 1955: 283). BIONOMICS: [As for ciliata].
41. Psorophora (P.) howardii Coquillett, 1901a: 258. TYPE: Holotype ♂, Hartsville (Darlington Co.), South Carolina, 23 July 1901, W. K. Coker (USNM, 5793). BIONOMICS: [Larvae in shaded or unshaded temporary rainpools].
- *42. Psorophora (Janthinosoma) cyanescens (Coquillett, 1902d: 137). TYPE: Lectotype ♀, Brownsville (Cameron Co.), Texas, May (USNM, 6308; selection of Stone and Knight 1955: 283). BIONOMICS: [Larvae in sunlit temporary rainpools].
- *43. Psorophora (J.) musica (Say, 1829: 149); sayi (Dyar & Knab, 1906c: 181), new name; sayi (Theobald, 1907: 155), new name [= ferox]. TYPE: Adult, Indiana (NE). BIONOMICS: [Larvae in temporary rainpools in or near wooded areas].
44. Psorophora (J.) horrida (Dyar & Knab, 1908: 56). TYPE: Lectotype ♀, Corinth (Alcorn Co.), Mississippi, 14 Aug 1904, H. S. Barber (USNM, 11999; selection of Roth 1945: 4). BIONOMICS: [Larvae in shaded temporary pools after summer rains].
45. Psorophora (J.) longipalpus Randolph & O'Neill, 1944: 88. TYPE: Lectotype ♀, Harris Co., Texas, 11-1-39 (USNM; selection of Stone 1962: 246). BIONOMICS: [As for longipalpis].
46. Psorophora (J.) longipalpis Roth, 1945: 13 [= longipalpus]. TYPE: Holotype ♂ with entire abdomen on slide, Fayetteville (Washington Co.), Arkansas, 24 Aug 1933, H. H. Schwardt (USNM). BIONOMICS: [Larvae in heavily shaded temporary rainpools].
47. Psorophora (Grabhamia) columbiae (Dyar & Knab, 1906a: 135) [= confinnis]. TYPE: Holotype ♀, Grassymead, near Fort Hunt (Fairfax Co.), Virginia, 21 June, H. G. Dyar (USNM, 9974). BIONOMICS: [Larvae in temporary rainpools, usually muddy and without vegetation].
48. Psorophora (G.) floridensis (Dyar & Knab, 1906a: 135) [= confinnis]. TYPE: Holotype ♀ (43), Alligator Creek (? Seminole Co.), Florida, 18 Mar 1905, A. N. Caudell (USNM, 9972). BIONOMICS: [As for columbiae].
49. Psorophora (G.) texana (Dyar & Knab, 1906a: 135) [= confinnis]. TYPE: Holotype ♀, Brownsville (Cameron Co.), Texas, 21 May 1904, H. S. Barber (USNM, 9971). BIONOMICS: [As for columbiae].
- *50. Psorophora (G.) discolor (Coquillett, 1903d: 256). TYPE: Holotype ♀, Delair (Camden Co.), New Jersey, J. B. Smith (USNM, 6894). BIONOMICS: [Larvae in temporary ground pools and rice fields].
51. Psorophora (G.) nana (Coquillett, 1903d: 256) [= pygmaea]. TYPE: Lectotype ♀, Key West (Munroe Co.), Florida, Aug 1901, August Busck (USNM, 6893; selection of Stone and Knight 1955: 285). BIONOMICS: [Larvae in temporary rainpools].
52. Aedes (Ochlerotatus) aboriginis Dyar, 1917b: 99. TYPE: Lectotype ♂, Longmire Springs, Mt. Rainier National Park (Pierce Co.), Washington, 18 June 1917, H. G. Dyar (USNM, 21544; selection of Knight 1951: 96). BIONOMICS: Bred from larvae in temporary puddles in marsh and in woodland pools near marsh.
53. Aedes (O.) abserratus (Felt & Young, 1904: 312). TYPE: Holotype

adult, Elizabethtown (Essex Co.), New York, 14 June (NY). BIONOMICS: Bred from larva in cold mountain pool.

54. Aedes (Ochlerotatus) centrotus Howard, Dyar & Knab, 1917: 747 [= abserratus]. TYPE: Lectotype ♀, White River (Algoma Co.), Ontario, 24-25 June 1907, F. Knab (USNM, 12281; selection of Knight 1951: 98). BIONOMICS: [Larvae in cold pools]. Females taken while biting in forest during the day-time.

55. Aedes (O.) dysanor Dyar, 1921c: 70 [= abserratus]. TYPE: Holotype ♂, Plattsburgh (Clinton Co.), New York, Apr 1905, H. G. Dyar and Edna Hudson (USNM, 24023). BIONOMICS: [As for abserratus].

56. Aedes (O.) aloponotum Dyar, 1917b: 98. TYPE: Holotype ♀, Lake Cushman (Mason Co.), Washington, 28 June 1917, H. G. Dyar (USNM, 21543). BIONOMICS: [Larvae probably in temporary pools in open swamps, edges of grassy marshes or in woodland pools].

57. Aedes (O.) atlanticus Dyar & Knab, 1906c: 198. TYPE: Syntypes larvae, [New Brunswick] (Middlesex Co.), New Jersey, 1 Aug, J. B. Smith; Sanford (Seminole Co.), Florida, 17 Mar 1905, H. G. Dyar (NE). BIONOMICS: Larvae in woodland pools with Aedes canadensis and Aedes sylvestris (Smith) and in semipermanent marshy pool, containing leaves of small water plants, joined to small ditch (Dyar). Adults in low swampy woods (Dyar).

*58. Aedes (O.) aurifer (Coquillett, 1903d: 255). TYPE: Lectotype ♀, Center Harbor (Belknap Co.), New Hampshire, 25 June, H. G. Dyar (USNM, 12022; selection of Stone and Knight 1956a: 215). BIONOMICS: [Larvae in temporary pools, especially in cranberry bogs].

59. Aedes (O.) barri Rueger, 1958: 34. TYPE: Holotype ♂ (20 V I 56-18) with associated larval and pupal skins, alongside of north boundary road, about 0.3 mi from corner west of north arm of Lake Itasca, Itasca State Park (Clearwater Co.), Minnesota, 20 May 1956, M. E. Rueger (USNM, 64085). BIONOMICS: Bred from larvae in lakeside marsh of cattails and sedge grass.

60. Aedes (O.) bicristatus Thurman & Winkler, 1950: 239. TYPE: Lectotype ♂ with associated pupal skin and genitalia slide, near Kelseyville, Township 13 N, Range 9 W, Sections 11 and 12, elev. 1390 ft (Lake Co.), California, 10 Mar 1950, E. C. Winkler (USNM; selection of Stone and Knight 1956a: 215). BIONOMICS: Bred from larvae in grassy roadside ditch and pools in flooded meadow, full and partial sun.

61. Aedes (O.) bimaculatus (Coquillett, 1902g: 84). TYPE: Holotype ♀, Brownsville (Cameron Co.), Texas, 16 June, C.H.T. Townsend (USNM, 6259). BIONOMICS: [Larvae in semipermanent ground pools and ditches].

62. Aedes (O.) cacothius Dyar, 1923: 44. TYPE: Lectotype ♀, Shoshone Point, elev. 8200 ft, Yellowstone Park, Wyoming, 27 June 1922, H. G. Dyar (USNM, 25952; selection of Stone and Knight 1956a: 215). BIONOMICS: [Larvae probably in snow water pools]. Adults taken biting near noon in sun, on exposed hillside.

63. Aedes (O.) campestris Dyar & Knab, 1907b: 213. TYPE: Lectotype ♀, Oxbow, Saskatchewan, 18-19 June 1907, F. Knab (USNM, 10874; selection of Stone and Knight 1956a: 216). BIONOMICS: [Larvae in pools formed by melting snow or rain].

64. Aedes (O.) callithotrys Dyar, 1920a: 16 [= campestris]. TYPE: Lectotype ♂ (1159) with genitalia slide (1159), Whitehorse, Yukon, 17 July 1919, H. G. Dyar (USNM, 22616; selection of Stone and Knight 1956a: 216). BIONOMICS: [Larvae in pools formed by melting snow or rain]. Adults taken in pine country.

*65. Aedes (O.) canadensis (Theobald, 1901b: 3). TYPE: ♂, ♀, De Grassi Point, Lake Simcoe, Ontario, E. M. Walker (BM). BIONOMICS: [Larvae most commonly in temporary or semipermanent shaded woodland pools containing fallen leaves]. Adults taken in woods and swamps.

66. Aedes (O.) nivitarsis (Coquillett, 1904f: 168) [= canadensis]. TYPE: Lectotype ♀, [Garret Mountain], Paterson (Passaic Co.), New Jersey, 13 or 17 May, J. B. Smith (USNM; selection of Stone and Knight 1956a: 222). BIONOMICS: [Larvae in temporary or semipermanent woodland pools].

67. Aedes (O.) mathesoni Middlekauff, 1944: 42 [= ssp. of canadensis]. TYPE: Holotype ♀, Kissimmee (Osceola Co.), Florida, 17 Sept 1943 (USNM). BIONOMICS: [Larvae in abandoned foxhole and probably in temporary or semipermanent woodland pools]. Female caught in light trap.

68. Aedes (O.) cantator (Coquillett, 1903d: 255). TYPE: Holotype ♀, [Summit] (Union Co.), New Jersey, 6 May, LaRue Holmes (USNM). BIONOMICS: [Larvae in coastal marshes and pools, fresh and salty].

69. Aedes (O.) cataphylla Dyar, 1916b: 86. TYPE: Holotype ♀, Fallen Leaf, Lake Tahoe (El Dorado Co.), California, 11 June 1916 (USNM, 20354). BIONOMICS: [Larvae in cold, temporary ground pools]. Adult taken biting by day in woods.

70. Aedes (O.) prodotes Dyar, 1917c: 118 [= cataphylla]. TYPE: Holotype ♂, Bozeman (Gallatin Co.), Montana, 7 May 1907, R. A. Cooley (USNM, 21546). BIONOMICS: [Larvae in cold, temporary ground pools].

71. Aedes (O.) pacificensis Hearle, 1927: 101 [= ssp. of cataphylla]. TYPE: Holotype ♂, Discovery Island, British Columbia, elev. ca. 100 ft., 12 Apr 1920, W. B. Anderson (CNC, 2501). BIONOMICS: [Larvae in pools formed by melting snow and floodwaters]. Adults taken on island with dry wooded and bare rocky ridges, with an occasional small salt marsh near shore.

72. Aedes (O.) lazarensis (Felt & Young, 1904: 312) [= communis]. TYPE: ♂, ♀, larva, Elizabethtown (Essex Co.), New York, 9-11 June 1904, E. P. Felt (NY). BIONOMICS: Bred from larvae in cold mountain pool.

73. Aedes (O.) borealis (Ludlow, 1911: 178) [= communis]. TYPE: Lectotype ♀, [Fort Gibbon], Alaska, July (USNM, 27809; selection of Stone and Knight 1956a: 215). BIONOMICS: [Larvae in pools formed by melting snow in spring].

74. Aedes (O.) tahoensis Dyar, 1916b: 82 [= communis]. TYPE: Lectotype ♂ (FE 14), Fallen Leaf, Lake Tahoe (El Dorado Co.), California, 5 June 1916 (USNM, 20352; selection of Stone and Knight 1956a: 225). BIONOMICS: Bred from larvae in temporary, clear pools formed by melting snow.

75. Aedes (O.) altiusculus Dyar, 1917b: 100 [= communis]. TYPE: Lectotype ♂, "Indian Henry's," Mt. Rainier National Park (Pierce Co.), Washington, 13 June 1917, Dyar, Allen and Flett (USNM, 21545; selection of Stone and Knight 1956a: 214). BIONOMICS: Bred from larvae in melted snow in mountain meadow.

76. Aedes (O.) masamae Dyar, 1920d: 166 [= communis]. TYPE: Holotype ♀, Crater Lake (Klamath Co.), Oregon, elev. 8000 ft, 29 July 1920, H. G. Dyar (USNM, 23832). BIONOMICS: [As for borealis].

77. Aedes (O.) prolixus Dyar, 1922a: 2 [= communis]. TYPE: Lectotype ♂ with genitalia slide (1579), Anchorage, Alaska, 11 June 1921, J. M. Aldrich (USNM, 24953; selection of Stone and Knight 1956a: 224). BIONOMICS: [As for borealis].

78. Aedes (O.) decticus Howard, Dyar & Knab, 1917: 737. TYPE: Holotype ♀, White River (Algoma Co.), Ontario, 25 June 1907, F. Knab (USNM,

- 12280). BIONOMICS: [Larvae in sphagnum bogs, swamps and woodland pools].
79. Aedes (O.) pseudodiantaeus Smith, 1952: 21 [= decticus]. TYPE: Holotype ♂, Belchertown (Hampshire Co.), Massachusetts, 10 May 1950, M. E. Smith (USNM). BIONOMICS: Bred from larvae in sphagnum bog.
80. Aedes (O.) diantaeus Howard, Dyar & Knab, 1913: fig 167. TYPE: Lectotype ♂ with genitalia slide (484), Dublin (Cheshire Co.), New Hampshire, June 1909, A. Busck (USNM, 12678; selection of Stone and Knight 1956a: 217). BIONOMICS: Larvae in spring pools formed by melted snow.
81. Aedes (O.) curriei (Coquillett, 1901a: 259) [= dorsalis]. TYPE: Holotype ♀, Boise (Ada Co.), Idaho, C. B. Sampson (USNM, 5798; not a lectotype as stated by Dyar and Knab 1906: 202, see Stone and Knight 1956a: 216). BIONOMICS: [Larvae in temporary ground pools].
82. Aedes (O.) onondagensis (Felt, 1904: 304) [= dorsalis]. TYPE: Holotype ♀, vicinity of Lake Onondaga, Syracuse (Onondaga Co.), New York, 19 Sept 1904 (NY). BIONOMICS: [Larvae probably in temporary pools, salt or fresh].
83. Aedes (O.) lativittatus (Coquillett, 1906b: 109) [= dorsalis]. TYPE: Lectotype ♀, Arden (Alameda Co.), California, 19 July 1903 (USNM; selection of Stone and Knight 1956a: 220). BIONOMICS: [As for onondagensis].
84. Aedes (O.) quaylei Dyar & Knab, 1906c: 202 [= dorsalis]. TYPE: Syntypes larvae, California (NE). BIONOMICS: Larvae in salt marshes.
85. Aedes (O.) mediolineatus (Ludlow, 1907: 129) [= dorsalis]. TYPE: Lectotype ♀, Fort Lincoln (Burleigh Co.), North Dakota, June, July or Aug (USNM, 10282; selection of Stone and Knight 1956a: 220). BIONOMICS: [As for onondagensis].
86. Aedes (O.) dupreei (Coquillett, 1904a: 10). TYPE: Lectotype ♂ with genitalia slide, Baton Rouge (East Baton Rouge Par.), Louisiana, J. W. Dupree (USNM, 7340; selection of Stone and Knight 1956a: 217). BIONOMICS: [Larvae in temporary woodland rainpools, hiding among leaves and debris on the bottom].
87. Aedes (O.) excrucians (Walker, 1856b: 429). TYPE: Adult, Nova Scotia (BM). BIONOMICS: [Larvae in temporary pools in open swamps, along edges of flooded grassy marshes and in woodland pools, during the spring].
88. Aedes (O.) siphonalis (Grossbeck, 1904a: 332) [= excrucians]. TYPE: Lectotype ♀, Livingston Park, near New Brunswick (Middlesex Co.), New Jersey, 10 May (USNM; selection of Stone and Knight 1956a: 225). BIONOMICS: [Larvae probably in temporary pools, in spring].
89. Aedes (O.) abfitchii (Felt, 1904: 381) [= excrucians]. TYPE: Syntypes larvae, Karner (Albany Co.), New York, early May (NY). BIONOMICS: [As for siphonalis].
90. Aedes (O.) sansoni Dyar & Knab, 1909a: 102 [= excrucians]. TYPE: Lectotype ♀ (10), Banff, Alberta, summer 1908, N. B. Sanson (USNM, 12195; selection of Dyar 1917: 114). BIONOMICS: [Larvae in river bed pools (Dyar 1917: 114)].
91. Aedes (O.) euedes Howard, Dyar & Knab, 1913: fig. 191 [= excrucians]. TYPE: Lectotype ♂ with genitalia slide (446), Trenton (Hastings Co.), Ontario, 24 May 1900, J. Fletcher (USNM, 12272; selection of Stone and Knight 1956a: 217). BIONOMICS: [As for excrucians].
92. Aedes (O.) fitchii (Felt & Young, 1904: 312). TYPE: Adult, larva, Karner (Albany Co.), New York, 10 May (NY). BIONOMICS: Larvae in woodland pool.

93. Aedes (O.) palustris Dyar, 1916b: 89 [= fitchii]. TYPE: Lectotype ♂ (FK77), Fallen Leaf, Lake Tahoe (El Dorado Co.), California, 1-6 June 1916, H. G. Dyar (USNM, 20351; selection of Stone and Knight 1956a: 223). BIONOMICS: Larvae in temporary grassy pools and marshes.

94. Aedes (O.) pricei Dyar, 1917a: 16 [= fitchii]. TYPE: Holotype ♀, Fallen Leaf, Lake Tahoe (El Dorado Co.), California, 9 June 1916, H. G. Dyar (USNM, 21043; see Stone and Knight 1956a: 223). BIONOMICS: Larvae in grassy marshes.

95. Aedes (O.) mimesis Dyar, 1917c: 116 [= fitchii]. TYPE: Holotype ♂, Drummond (Granite Co.), Montana, H. G. Dyar (USNM, 21553). BIONOMICS: [Larvae in early spring pools, especially flooded grassy edges of ponds and marshes].

96. Aedes (O.) fletcheri (Coquillett, 1902g: 84) [= flavescens]. TYPE: Lectotype ♀, Carnduff, Assiniboia, Saskatchewan, 28 May 1901, F. Fletcher (USNM, 6255; selection of Stone and Knight 1956a: 218). BIONOMICS: [Larvae in semipermanent ground pools in spring].

97. Aedes (O.) pallens Ross, 1943: 148 [= ssp. of fulvus]. TYPE: Holotype ♂ with genitalia slide, New Orleans (Orleans Par.), Louisiana, 10 Sept 1914, W. V. King (USNM). BIONOMICS: [Larvae in deep temporary pools following very heavy rains].

98. Aedes (O.) grossbecki Dyar & Knab, 1906c: 201. TYPE: Syntypes larvae, New Jersey (NE). BIONOMICS: [Larvae in early temporary woodlands pools].

99. Aedes (O.) sylvicola (Grossbeck, 1906: 129) [= grossbecki]. TYPE: Lectotype ♀, Livingston Park, near New Brunswick (Middlesex Co.), New Jersey, 5-6 May 1904, J. A. Grossbeck (USNM; selection of Stone and Knight 1956a: 225). BIONOMICS: Larvae in early, freshwater woodland pools.

100. Aedes (O.) hexodontus Dyar, 1916b: 83. TYPE: Lectotype ♀ (FJ-13) with associated larval skin, Fallen Leaf, Lake Tahoe (El Dorado Co.), California, 7 June 1916, H. G. Dyar (USNM, 20353; selection of Knight 1951: 93). BIONOMICS: Larvae in temporary pools.

101. Aedes (O.) cyclocerculus Dyar, 1920a: 23 [= hexodontus]. TYPE: Lectotype ♂ (G-22) with associated larval and pupal skins, Prince Rupert, British Columbia, 11 May 1919, H. G. Dyar (USNM, 22617; selection of Knight 1951: 93). BIONOMICS: Larvae in muskeg pools.

102. Aedes (O.) leuconotips Dyar, 1920a: 24 [= hexodontus]. TYPE: Lectotype ♂ (N) with associated larval skin, Prince Rupert, British Columbia, 26 May 1919, H. G. Dyar (USNM, 22618; selection of Knight 1951: 93). BIONOMICS: Larvae in muskeg pools.

103. Aedes (O.) labradorensis Dyar & Shannon, 1925b: 78 [= hexodontus]. TYPE: Holotype ♀, Hawk's Harbor, Labrador, [Newfoundland], 20 July 1908, Admiral Peary's 1908 polar expedition (USNM, 27862). BIONOMICS: [Larvae in pools formed by melting snow, probably on the tundra, in spring].

104. Aedes (O.) impiger (Walker, 1848: 6). TYPE: Holotype ♀, St. Martin's Falls [St. Martin], Albany River, Hudson's Bay, Ontario, G. Barston (BM). BIONOMICS: [Larvae in pools formed by melting snow].

105. Aedes (O.) nearcticus Dyar, 1919a: 32 [= impiger]. TYPE: Lectotype ♂ (1391), Bernard Harbour, Northwest Territories, 19 July 1915, F. Johannsen (CNC, 1877; selection of Vockeroth 1954: 110). BIONOMICS: [As for impiger].

106. Aedes (O.) implicatus Vockeroth, 1954: 110. TYPE: Holotype ♂ with associated larval and pupal skins, Rupert House, Quebec, 1949, D. P. Gray

(CNC, 6031). BIONOMICS: [Larvae in temporary pools in early spring, often in forests].

107. Aedes (O.) increpitus Dyar, 1916b: 87. TYPE: Lectotype ♂, Fallen Leaf, Lake Tahoe (El Dorado Co.), California, 3 June 1916, H. G. Dyar (USNM, 20350; selection of Stone and Knight 1956a: 219). BIONOMICS: Larvae in beach pools filled by high waves and seepage, in marsh pools, very rarely in clear cold mountain or larger grassy marshes.

108. Aedes (O.) vittatus (Theobald, 1903c: 313) [= increpitus]. TYPE: Holotype ♀, Pecos Canyon (? San Miguel Co.), New Mexico, 25 June, M. Grabham and T. D. A. Cockerell (BM). BIONOMICS: [Larvae in temporary pools]. Adults taken after sunset.

109. Aedes (O.) mutatus Dyar, 1919b: 24 [= increpitus]. TYPE: Holotype ♂ with genitalia slide (663), Missoula (Missoula Co.), Montana, 6 July 1917, H. G. Dyar (USNM, 21918). BIONOMICS: [Larvae in temporary pools].

110. Aedes (O.) hewitti Hearle, 1923: 5 [= increpitus]. TYPE: Holotype ♀ (13042a), Yale, British Columbia, 8 Aug 1920, E. Hearle (CNC, 521). BIONOMICS: [Larvae in pools formed by floodwaters, rain and melted snow].

111. Aedes (O.) infirmatus Dyar & Knab, 1906c: 197. TYPE: Syntypes larvae, Baton Rouge (East Baton Rouge Par.), Louisiana, J. W. Dupree (NE). BIONOMICS: [Larvae in temporary ground pools, particularly edges of marshes, after summer rains].

112. Aedes (O.) intrudens Dyar, 1919b: 23. TYPE: Lectotype ♂ with genitalia slide (467), White River (Algoma Co.), Ontario, 25 June 1907, F. Knab (USNM, 21823; selection of Stone and Knight 1956a: 219). BIONOMICS: [Larvae in woodland pools, open bogs and marshes, particularly in water from melting snow]. Males taken by beating bushes.

113. Aedes (O.) melanimon Dyar, 1924b: 126. TYPE: Lectotype ♂ with genitalia slide (1955), Bakersfield (Kern Co.), California, 26 Feb 1924, C. K. Badger (USNM; selection of Stone and Knight 1956a: 221). BIONOMICS: ["Larvae in temporary pools when filled by the very occasional rains of the region," Dyar 1928: 202].

114. Aedes (O.) klotsi Matheson, 1933: 69 [= melanimon]. TYPE: Holotype ♂ with genitalia slide, Mountain Home Lake, Fort Garland (Costilla Co.), Colorado, elev. 8300 ft, 20-25 July 1932, A. B. and Elsie B. Klots (USNM, 49241). BIONOMICS: Larvae along edge of small, cold, clear mountain stream. Adults abundant in tall grass of meadow near lake.

115. Aedes (O.) mitchellae (Dyar, 1905a: 74). TYPE: Holotype ♀, Jacksonville (Duvale Co.), Florida, H. G. Dyar (USNM, 8402, not 8407 as stated in original description, see Stone and Knight 1956a: 222). BIONOMICS: Larvae in temporary pools of fresh water.

116. Aedes (O.) monticola Belkin & McDonald, 1957: 179. TYPE: Holotype ♂ (UCLA 173-104) with associated larval and pupal skins and genitalia slide, Madera Canyon (Santa Cruz Co.), Arizona, elev. ca. 5000 ft, 18 Aug 1955, W. A. McDonald (USNM, 63244). BIONOMICS: Larvae in rothole in dead, fallen sycamore.

117. Aedes (O.) iridipennis Dyar, 1922b: 92 [= muelleri]. TYPE: Holotype ♀, head of Indian Creek, south base of Cochise Head, Chiricahua Mountains (Cochise Co.), Arizona, elev. 6100 ft, 17 Aug 1917, C. H. T. Townsend (USNM, 25264). BIONOMICS: [Larvae in treeholes]. Female taken biting in cave by day.

118. Aedes (O.) nigripes (Zetterstedt, 1838: 807). TYPE: ♂, ♀,

Greenland (LS; see Natvig 1954: 86-92). BIONOMICS: [Larvae in pools formed by melting ice and snow].

119. Aedes (O.) innuitus Dyar & Knab, 1918a: 166 [= nigripes]. TYPE: Lectotype ♂ with genitalia slide (708), Kangerdlooksoah [Kangerdlugssuak, 77° 23'N 67° 01'W], Inglefield Gulf, Greenland, 6 Aug 1908, C. C. Craft (USNM, 21561; selection of Stone and Knight 1956a: 219; the type locality and collector may not be correct and may refer only to 2 additional females seen by Dyar and Knab, in that case the citation should be Greenland, F. Meinert). BIONOMICS: [As for nigripes].

120. Aedes (O.) nigromaculis (Ludlow, 1906c: 83). TYPE: Lectotype ♀, Fort Keogh [near Miles City] (Custer Co.), Montana, Sept 1906 (USNM, 10147; selection of Stone and Knight 1956a: 222). BIONOMICS: [Larvae probably in alkaline waters in rain filled depressions and in irrigation ditches].

121. Aedes (O.) griseus (Ludlow, 1907: 130) [= nigromaculis]. TYPE: Holotype ♀, Boise Barracks (Ida Co.), Idaho, July (USNM). BIONOMICS: [As for nigromaculis].

122. Aedes (O.) niphadopsis Dyar & Knab, 1918a: 166. TYPE: Lectotype ♀, Salt Lake Co., Utah, 10 or 15 Apr 1914, C. T. Voorhies (USNM, 21560; selection of Stone and Knight 1956a: 222). BIONOMICS: [Larvae in temporary snow pools in spring].

123. Aedes (O.) pionips Dyar, 1919b: 19. TYPE: Lectotype ♂ (994/B9) with genitalia slide (994), White River (Algoma Co.), Ontario, 19 June 1918, H. G. Dyar (USNM, 21922; selection of Stone and Knight 1956a: 223). BIONOMICS: Larvae in small mossy pools in spruce swamp. Males swarming at dusk in openings between dwarf spruces in swamp.

*124. Aedes (O.) pullatus (Coquillett, 1904f: 168). TYPE: Lectotype ♂ with genitalia slide (21), Kaslo, NW shore of Kootenay Lake, Selkirk Mts, British Columbia, elev. 1670 ft, emerged 12 June 1903, H. G. Dyar (USNM, 8030; selection of Stone and Knight 1956a: 224; see Currie 1904: 26 for locality). BIONOMICS: Larvae in pools formed by melting snow or the overflow of streams, usually at high elevations.

125. Aedes (O.) acrophilus Dyar, 1917d: 127 [= pullatus]. TYPE: Holotype ♀, Lake Louise, Laggan, Alberta, 18 Aug 1906, H. G. Dyar and A. N. Caudell (USNM, 21548). BIONOMICS: [As for pullatus].

126. Aedes (O.) pearyi Dyar & Shannon, 1925b: 78 [= pullatus]. TYPE: Holotype ♀, Hawk's Harbor, Labrador, [Newfoundland], 20 July 1908, Admiral Peary's 1908 polar expedition (USNM, 27861). BIONOMICS: [As for pullatus].

127. Aedes (O.) punctodes Dyar, 1922a: 1. TYPE: Lectotype ♂ (1582), Unalakleet, Norton Sound, Alaska, 3-9 June 1921, S. Hadwen (USNM, 24954; selection of Knight 1951: 97). BIONOMICS: Larvae from pools in tundra.

128. Aedes (O.) punctor (Kirby, 1837: 309). TYPE: Adult, Mackenzie River valley, near Fort Norman, Northwest Territories, lat. 65° (LU). BIONOMICS: [Larvae in pools formed by melting snow].

129. Aedes (O.) implacabilis (Walker, 1848: 7) [= punctor]. TYPE: Holotype ♀ with legs all missing, St. Martin's Falls [St. Martin], Albany River, Hudson's Bay, Ontario, G. Barnston (BM). BIONOMICS: [As for punctor].

130. Aedes (O.) provocans (Walker, 1848: 7) [= punctor]. TYPE: ♂ with genitalia missing, ♀, Nova Scotia, Lt. Redman (BM). BIONOMICS: [As for punctor].

131. Aedes (O.) auroides (Felt, 1905b: 449) [= punctor]. TYPE: Holotype ♀ bred from larva, Elizabethtown (Essex Co.), New York, 12 May (NY). BIONOMICS: [Larvae probably in temporary pools formed by melting snow].

132. Aedes (O.) rempeli Vockeroth, 1954: 112. TYPE: Holotype ♂ with associated larval and pupal skins, Great Whale River, Quebec, 17 June 1949, K. L. Knight and D. W. Jenkins (CNC, 6032). BIONOMICS: Bred from larva in large, apparently permanent pool, about 45 ft x 30 ft x 18 in, the bottom mostly bare rock with few clumps of grass; in association with Aedes communis, A. nigripes and A. impiger.

133. Aedes (O.) riparius Dyar & Knab, 1907b: 213. TYPE: Lectotype ♀, Winnipeg, Manitoba, 21 June 1907, F. Knab (USNM, 10875; selection of Stone and Knight 1956a: 225). BIONOMICS: [Larvae in early spring pools on the prairies].

134. Aedes (O.) schizopinax Dyar, 1929b: 1. TYPE: Holotype ♂, Story Creek railway crossing (Gallatin Co.), Montana, 6 Apr 1928, G. Allen Mail (USNM, 41709). BIONOMICS: Larvae in overflow from permanent pool.

135. Aedes (O.) sierrensis (Ludlow, 1905a: 231). TYPE: Lectotype ♀, Three Rivers, Sierra Nevada (Tulare Co.), California, E. J. Bingham (USNM; selection of Stone and Knight 1956a: 225). BIONOMICS: [Larvae in treeholes and occasionally in artificial containers].

136. Aedes (O.) sollicitans (Walker, 1856b: 427). TYPE: ♀, United States [Restricted to vicinity of Charleston (Charleston Co.), South Carolina] (BM). BIONOMICS: [Larvae in salt or brackish marshes in coastal areas, in warm weather].

137. Aedes (O.) spencerii (Theobald, 1901b: 99). TYPE: 4 ♀, Stony Mt. and St. Boniface, Manitoba, July, W. I. Spencer (BM). BIONOMICS: [Larvae in temporary pools formed by melting snow or rain on prairie in early spring].

138. Aedes (O.) idahoensis (Theobald, 1903a: 250) [= ssp. of spencerii]. TYPE: Adults, Market Lake (Jefferson Co.), Idaho, J. M. Aldrich (BM). BIONOMICS: [Larvae stated to be probably in an arm of Snake River near the town (Aldrich in Theobald, 1903: 250)].

*139. Aedes (O.) squamiger (Coquillett, 1902g: 85). TYPE: Lectotype ♀, Stanford University (Santa Clara Co.), California, V. L. Kellogg (USNM, 6256; selection of Stone and Knight 1956a: 225). BIONOMICS: [Larvae in salt or brackish pools in coastal marshes].

140. Aedes (O.) deniedmannii (Ludlow, 1904: 234) [= squamiger]. TYPE: Lectotype ♀, Benicia Barracks (Solano Co.), California, Mar, Apr or May, W. F. de Niedmann (USNM; selection of Stone and Knight 1956a: 217). BIONOMICS: [As for squamiger].

141. Aedes (O.) hirsuteron (Theobald, 1901b: 98) [= sticticus]. TYPE: ♀, Woodstock (Shenandoah Co.), Virginia, June, F. C. Pratt (BM). BIONOMICS: [Larvae in temporary ground pools in spring].

142. Aedes (O.) pretans (Grossbeck, 1904b: 332) [= sticticus]. TYPE: Lectotype ♀, Great Piece Meadow [probably Chatham] (Morris Co.), New Jersey, 27 Apr or 15 May, J. B. Smith (USNM; selection of Stone and Knight 1956a: 224). BIONOMICS: [As for hirsuteron].

143. Aedes (O.) aestivalis (Dyar, 1904b: 245) [= sticticus]. TYPE: Lectotype ♂ (279.0) with genitalia slide (22), Kaslo, NW shore of Kootenay Lake, Selkirk Mts., British Columbia, elev. 1670 ft, end of June-Aug 1903, H. G. Dyar (USNM; selection of Stone and Knight 1956a: 213; see Currie 1904: 26 for locality). BIONOMICS: [As for hirsuteron].

144. Aedes (O.) aldrichi Dyar & Knab, 1908: 57 [= sticticus]. TYPE: Lectotype ♀, Market Lake (Jefferson Co.), Idaho, J. M. Aldrich (USNM, 12010; selection of Stone and Knight 1956a: 213). BIONOMICS: [As for hirsuteron].

145. Aedes (O.) gonimus Dyar & Knab, 1918a: 165 [= sticticus]. TYPE: Lectotype ♀, Kerrville (Kerr Co.), Texas, 20 June 1907, F. C. Pratt (USNM, 21559; selection of Stone and Knight 1956a: 218). BIONOMICS: [Larvae as for hirsuteron]. Adults in a deep canyon, bite fiercely.

146. Aedes (O.) vinnipegensis Dyar, 1919b: 34 [= sticticus]. TYPE: Holotype ♀, Winnipeg Beach, Manitoba, 4-5 July 1918 (USNM, 21921). BIONOMICS: [As for hirsuteron].

147. Aedes (O.) stimulans (Walker, 1848: 4). TYPE: ♀, Nova Scotia, Lt. Redman (BM). BIONOMICS: [Larvae in temporary pools in spring, formed by melting snow, rain or overflow water from streams. Often found in woodland pools].

148. Aedes (O.) subcantans (Felt, 1905b: 474) [= stimulans]. TYPE: ♂, ♀, larva, [probably Nassau (Rensselaer Co.)], New York, [May 1905, E. P. Felt] (NY). BIONOMICS: Larvae in open grassy pools such as found along roadside or in meadows in association with fitchii and trichurus.

149. Aedes (O.) mercurator Dyar, 1920a: 13 [= stimulans]. TYPE: Lectotype ♂ with genitalia slide (1165), Dawson, Yukon Territory, 15 July 1919, H. G. Dyar (USNM, 22615; selection of Stone and Knight 1956a: 221). BIONOMICS: [As for stimulans].

150. Aedes (O.) mississippii Dyar, 1920c: 113 [= stimulans]. TYPE: Lectotype ♂ with genitalia slide (1263), Electric Mills (Kemper Co.), Mississippi, J. A. Le Prince (USNM, 22884; selection of Stone and Knight 1956a: 221). BIONOMICS: Larvae in tree stumps; [usually in temporary ground pools].

151. Aedes (O.) classicus Dyar, 1920c: 113 [= stimulans]. TYPE: Lectotype ♂ on slide, Hudson Co., New Jersey, 20 May 1920, W. R. Bryce-Delaney (USNM, 23111; selection of Stone and Knight 1956a: 216). BIONOMICS: Bred from freshwater pools near salt marsh.

152. Aedes (O.) albertae Dyar, 1920c: 115 [= stimulans]. TYPE: Lectotype ♂ with genitalia slide (1226), Edmonton, Alberta, 17 May 1919, H. G. Dyar (USNM, 22885; selection of Stone and Knight 1956a: 213). BIONOMICS: [As for stimulans].

153. Aedes (O.) damnosus (Say, 1823: 11) [= taeniorhynchus]. TYPE: Adult, Pennsylvania (NE). BIONOMICS: [Larvae in brackish and freshwater pools near coast].

154. Aedes (O.) thelcter Dyar, 1918c: 129. TYPE: Holotype ♀, Brownsville (Cameron Co.), Texas, 29 Aug 1916, M. M. High (USNM, 21718). BIONOMICS: [Larvae in overflow pools from irrigation ditches and in temporary rainpools].

155. Aedes (O.) keyensis Buren, 1947: 228 [= thelcter]. TYPE: Holotype ♀, Naval Hospital, Key West (Monroe Co.), Florida, 15 Oct 1946, Eddie Fernández (A). BIONOMICS: [Larvae as for thelcter]. Females taken in light trap.

156. Aedes (O.) thibaulti Dyar & Knab, 1910: 174. TYPE: Lectotype ♂ with genitalia slide (524), Scott (Pulaski Co.), Arkansas, 27 Apr 1909, J. K. Thibault (USNM, 12746; selection of Stone and Knight 1956a: 225). BIONOMICS: [Larvae in flooded bases of sweetgum and tupelogram trees in areas subject to flooding].

157. Aedes (O.) tormentor Dyar & Knab, 1906c: 191. TYPE: Syntypes larvae, Baton Rouge (East Baton Rouge Par.), Louisiana, J. W. Dupree (NE). BIONOMICS: [Larvae in temporary pools after summer rains; rare].

158. Aedes (O.) trichurus (Dyar, 1904a: 170). TYPE: Syntypes larva, egg, Kaslo, NW shore of Kootenay Lake, Selkirk Mts., British Columbia, elev. 1670 ft, 25 June 1903, H. G. Dyar (NE; see Currie 1904: 26 for locality). BIONOMICS: [Larvae in early spring pools formed by snow and rain in north-

ern swamps].

159. Aedes (O.) cinereoborealis (Felt & Young, 1904: 312) [= trichurus].
TYPE: Holotype adult, New York (NY). BIONOMICS: [As for trichurus].

160. Aedes (O.) pagetonotum Dyar & Knab, 1909b: 253 [= trichurus].
TYPE: Lectotype ♂ with genitalia slide (343), Ottawa, Ontario, 15 May 1900,
J. Fletcher (USNM, 12057; selection of Stone and Knight 1956a: 223). BIO-
NOMICS: [As for trichurus].

161. Aedes (O.) poliochros Dyar, 1919b: 35 [= trichurus]. TYPE: Holo-
type ♀, Aweme, Manitoba, 3 June 1904, N. Criddle (USNM, 21924). BIONOM-
ICS: [As for trichurus].

*162. Aedes (O.) trivittatus (Coquillett, 1902f: 193). TYPE: Holotype ♀,
Chester (Morris Co.), New Jersey, 10 or 14 Sept, J. B. Smith (USNM, 6702).
BIONOMICS: [Larvae in temporary rainpools in meadows, swamps and wood-
lands during summer].

163. Aedes (O.) inconspicuus (Grossbeck, 1904b: 332) [= trivittatus].
TYPE: Lectotype ♀, Garret Mt., Paterson (Passaic Co.), New Jersey, 5 Oct
(USNM; selection of Stone and Knight 1956a: 219). BIONOMICS: [As for tri-
vittatus].

164. Aedes (O.) varipalpus (Coquillett, 1902b: 292). TYPE: Holotype ♀,
Williams (Coconino Co.), Arizona, 29 July, H. S. Barber (USNM, 6559). BI-
ONOMICS: [Larvae in treeholes].

165. Aedes (O.) ventrovittis Dyar, 1916b: 84. TYPE: Holotype ♀, Fallen
Leaf, Lake Tahoe (El Dorado Co.), California, 2 June 1916, H. G. Dyar
(USNM, 20355). BIONOMICS: [Larvae in shallow, clear pools formed by
melting snow at elevations of about 6000 to 11,000 ft]. Female taken biting by
day under pines by meadow at north end of lake.

166. Aedes (O.) fisheri Dyar, 1917a: 19 [= ventrovittis]. TYPE: Lecto-
type ♀, Tahoe Tavern, at outlet of Lake Tahoe (Placer Co.), California, 20
June 1915, A. K. Fisher (USNM, 21042; selection of Stone and Knight 1956a:
217). BIONOMICS: [Larvae as for ventrovittis].

167. Aedes (Finlaya) atropalpus (Coquillett, 1902b: 292). TYPE: Lecto-
type ♀, Plummer's Island (Montgomery Co.), Maryland, 16 July 1902, H. S.
Barber (USNM, 6558; selection of Stone and Knight 1956a: 215). BIONOMICS:
[Larvae in overflow pools in rockholes along mountain streams and occasion-
ally in rain-filled rockholes away from streams].

168. Aedes (F.) hendersoni Cockerell, 1918: 199. TYPE: Lectotype ♀,
Box Elder Creek, 19 mi W of Douglas (Converse Co.), Wyoming, 25 Aug
1917, Schwabe and Henderson (USNM; selection of Stone and Knight 1956a:
218). BIONOMICS: [Larvae in treeholes and occasionally in artificial con-
tainers].

*169. Aedes (F.) triseriatus (Say, 1823: 12). TYPE: ♀, Pennsylvania (NE).
BIONOMICS: [Larvae in treeholes and occasionally in artificial containers].

170. Aedes (F.) niger (Ludlow, 1905b: 387) [= triseriatus]. TYPE: Holo-
type ♀, Rock Island Arsenal (Rock Island Co.), Illinois, 3 Aug 1905, G. G.
Craig (USNM). BIONOMICS: [As for triseriatus].

171. Aedes (F.) zoosophus Dyar & Knab, 1918a: 165. TYPE: Holotype ♀,
Kerrville (Kerr Co.), Texas, 19 Aug 1909, F. C. Pratt (USNM, 21558). BIO-
NOMICS: [Larvae in rot cavities of trees, particularly willows, and occasion-
ally in artificial containers].

172. Aedes (F.) alleni Turner, 1924: 84 [= zoosophus]. TYPE: Lecto-
type ♂ (1885) with genitalia slide, Mission (Hidalgo Co.), Texas, 28 Dec 1923

(USNM; selection of Stone and Knight 1956a: 214). BIONOMICS: Bred from larvae in willow treehole.

173. Aedes (Stegomyia) taeniatus (Wiedemann, 1828: 10) [= aegypti]. TYPE: ♂, ♀, Savannah (Chatam Co.), Georgia (LU). BIONOMICS: [Larvae in artificial containers].

174. Aedes (S.) excitans (Walker, 1848: 4) [= aegypti]. TYPE: ♀, Georgia, Abbot (BM). BIONOMICS: [As for taeniatus].

*175. Aedes (Aedimorphus) sylvestris (Theobald, 1901a: 406); montcalmi (Blanchard, 1905: 307), new name [= vexans]. TYPE: ♂, ♀, Rondeau Provincial Park (Kent Co.), Ontario; Lake Simcoe, Ontario; Stony Mt., Manitoba; July and Sept, E. M. Walker (Ontario) and W. I. Spencer (Manitoba) (BM). BIONOMICS: [Larvae in temporary rain or flood water pools and irrigation seepages].

176. Aedes (Aedimorphus) euochrus Howard, Dyar & Knab, 1917: 716 [= vexans]. TYPE: Holotype ♀, Popcum, British Columbia, 2 Aug 1903, J. Fletcher (USNM, 12057). BIONOMICS: [Larvae as for sylvestris].

177. Aedes (Aedes) fuscus Osten Sacken, 1877: 191 [= cinereus]. TYPE: ♂, ♀, Cambridge (Middlesex Co.), Massachusetts, May, C. R. Osten Sacken (MCZ). BIONOMICS: Bred from larvae in [temporary] pool.

178. Aedes (A.) pallidohirtus Grossbeck, 1905: 359 [= cinereus]. TYPE: Lectotype ♀, Orange [Watchung] Mts. (Essex Co.), New Jersey, 26 May 1905, Brehme (USNM; selection of Stone and Knight 1956a: 233). BIONOMICS: [Larvae in woodland pools, unshaded temporary rain pools and occasionally marshes].

179. Aedes (A.) hemiteleus Dyar, 1924c: 179 [= cinereus]. TYPE: Lectotype ♀, Lake Center Camp (Plumas Co.), California, 1 June 1920, H. G. Dyar (USNM; selection of Stone and Knight 1956a: 218). BIONOMICS: Larvae in meadow pools formed by high water of lake. Adults taken in meadow on grass and under willow.

180. Culiseta (C.) alaskaensis (Ludlow, 1906b: 326). TYPE: Lectotype ♂ with genitalia slide (222), Fort Egbert, Eagle, [Yukon River], Alaska, 2 June 1906, J. R. Bosley (USNM, 9959; selection of Stone and Knight 1957c: 196). BIONOMICS: [Larvae in shallow pools, clogged with debris and vegetation].

181. Culiseta (C.) impatiens (Walker, 1848: 5). TYPE: ♂, ♀, St. Martin's Falls [St. Martin], Albany River, Hudson's Bay, Ontario, G. Barnston (BM). BIONOMICS: [Larvae in permanent pools, usually with cold, clear water].

182. Culiseta (C.) pinguis (Walker, 1866: 337) [= impatiens]. TYPE: ♀, [Fraser River], British Columbia, J. K. Lord (? BM). BIONOMICS: [As for impatiens].

*183. Culiseta (C.) absobrina (Felt, 1904: 318) [= impatiens]. TYPE: ♂, ♀, larva, Elizabethtown (Essex Co.), New York, July-Aug (NY). BIONOMICS: Larvae in cold mountain pool.

184. Culiseta (C.) incidens (Thomson, 1869: 443). TYPE: ♀, California (LU). BIONOMICS: [Larvae in wide variety of permanent and semipermanent aquatic habitats, including running, stagnant, fresh and brackish water. Some preference for clear or semiclear water in at least partial shade].

185. Culiseta (C.) inornata (Williston, 1893d: 253). TYPE: Holotype ♀, Argus Mts (Inyo Co.), California, Apr 1891, A. Koebele (USNM). BIONOMICS: [Larvae in more or less permanent ground pools and ditches, often with foul water].

186. Culiseta (C.) magnipennis (Felt, 1904: 322) [= inornata]. TYPE: ♂, ♀, larva, Sodus Point (Wayne Co.), New York, 25 Aug (NY). BIONOMICS: Bred from larvae in shaded pool.

187. Culiseta (C.) particeps (Adams, 1903a: 26). TYPE: Lectotype ♀, Oak Creek Canyon (Coconino Co.), Arizona, elev. 6000 ft, F. H. Snow (USNM; selection of Stone 1958: 237). BIONOMICS: [Larvae in cool, rather clear, shaded pools in stream beds, often with algae and other vegetation].

188. Culiseta (C.) maccrackena Dyar & Knab, 1906a: 133 [= particeps]. TYPE: Lectotype ♀ (30-3) with genitalia slide (221), Stanford University (Santa Clara Co.), California, 23 June 1903, I. MacCracken (USNM, 9961; selection of Stone and Knight 1957c: 196). BIONOMICS: [As for particeps].

189. Culiseta (Culicella) minnesotae Barr, 1957: 163. TYPE: Holotype ♀, Olcott Park, near greenhouse, Virginia (St. Louis Co.), Minnesota, 4 May 1953, A. R. Barr (USNM, 62409). BIONOMICS: [Larvae probably in semipermanent marshes].

*190. Culiseta (Culicella) dyari (Coquillett, 1902f: 192) [= morsitans]. TYPE: Lectotype ♂, Center Harbor (Belknap Co.), New Hampshire, H. G. Dyar (USNM, 6700; selection of Stone and Knight 1957c: 196). BIONOMICS: [Larvae in rather large temporary cold pools in semipermanent marshes].

191. Culiseta (Culicella) brittoni (Felt, 1905a: 79) [= morsitans]. TYPE: Holotype ♀, Branford (New Haven Co.), Connecticut, 27 June 1904, H. L. Viebeck (NY). BIONOMICS: [As for dyari].

192. Culiseta (Culicella) parodites (Dyar, 1928b: 244). TYPE: Lectotype ♂ with genitalia slide (735), Saxeville (Waushara Co.), Wisconsin, 23 June 1909, B. K. Miller (USNM; selection of Stone and Knight 1957c: 196). BIONOMICS: [Larvae probably in cold pools in semipermanent marshes].

*193. Culiseta (Climacura) melanura (Coquillett, 1902f: 193). TYPE: Lectotype ♂ (20) with genitalia slide, Center Harbor (Belknap Co.), New Hampshire, H. G. Dyar (USNM, 6701; selection of Stone and Knight 1957c: 196). BIONOMICS: [Larvae primarily in pools in wooded permanent or semipermanent marshes].

194. Culex (Neoculex) apicalis Adams, 1903a: 26. TYPE: Lectotype ♀ lacking most of proboscis, both wings, both hindlegs, both midtibiae and one foretarsus, Oak Creek Canyon (Coconino Co.), Arizona, elev. 6000 ft, Aug, F. H. Snow (USNM; selection of Stone 1958: 236). BIONOMICS: [Larvae in canyon streams and woodland pools].

195. Culex (N.) arizonensis Bohart, 1949: 341. TYPE: Holotype ♂, 8 mi SE of Prescott (Yavapai Co.), Arizona, 25 Aug 1947, R. M. Bohart (USNM, 58662). BIONOMICS: Bred from larvae in shaded creekbed pool.

196. Culex (N.) reevesi Bohart, 1949: 342; boharti Brookman & Reeves, 1950: 159, new name. TYPE: Holotype ♂, 1 mi S of Monticello (Napa Co.), California, 8 Oct 1947, R. M. Bohart (USNM, 58663). BIONOMICS: Bred from larvae in shaded creekbed pool.

197. Culex (N.) reevesi Wirth, 1948: 230. TYPE: Adult, larva, California coast from Point Reyes to San Diego (LU). BIONOMICS: [Larvae in ponds].

*198. Culex (N.) territans Walker, 1856b: 428. TYPE: ♀, United States [Restricted to vicinity of Charleston (Charleston Co.), South Carolina] (NE). BIONOMICS: [Larvae in semipermanent and permanent pools in streams, and in swamps and ponds].

199. Culex (N.) saxatilis Grossbeck, 1905: 360 [= territans]. TYPE: Lectotype ♀, Garret Mt., Paterson (Passaic Co.), New Jersey, 31 Aug (USNM;

selection of Stone and Knight 1957a: 56). BIONOMICS: Larvae in rock-bottomed pool, associated with *C. pipiens*.

200. *Culex* (N.) *frickii* Ludlow, 1906a: 132 [= *territans*]. TYPE: Holotype ♀, Fort Snelling, St. Paul (Ramsey Co.), Minnesota, 1 Oct, E. B. Frick (USNM). BIONOMICS: [As for *territans*].

201. *Culex* (C.) *erythrothorax* Dyar, 1907: 124. TYPE: Holotype ♀, Nigger Slough [Gardena] (Los Angeles Co.), California, 30 May or 6 June 1906, H. G. Dyar and A. N. Caudell (USNM, 10009). BIONOMICS: Larvae in permanent sloughs containing reeds, *Lemna* and fish.

202. *Culex* (C.) *badgeri* Dyar, 1924b: 125 [= *erythrothorax*]. TYPE: Lectotype ♂ (34A) with genitalia slide (1945), Bakersfield (Kern Co.), California, 29 Jan 1924, C. K. Badger (USNM; selection of Stone and Knight 1957a: 43). BIONOMICS: [Larvae in large shallow ponds containing heavy growths of vegetation]. Adults taken in "timber, between catch basin and river."

203. *Culex* (C.) *affinis* Adams, 1903a: 25; *peus* Speiser, 1904a: 148, new name. TYPE: Holotype ♀ with 2 legs missing, Oak Creek Canyon (Coconino Co.), Arizona, elev. 6000 ft, Aug, F. H. Snow (USNM). BIONOMICS: [Larvae in all types of permanent or semipermanent ground waters, often polluted].

*204. *Culex* (C.) *stigmatosoma* Dyar, 1907: 123 [= *peus*]. TYPE: Holotype ♀ (C 78π), Pasadena (Los Angeles Co.), California, 20 May 1906, H. G. Dyar and A. N. Caudell (USNM, 1008). BIONOMICS: Larva in cement-lined pool.

205. *Culex* (C.) *consobrinus* Robineau-Desvoidy, 1827: 408 [= *pipiens*]. TYPE: Adult, Pennsylvania (NE). BIONOMICS: [Larvae in large artificial containers, contaminated pools and ditches; domestic].

206. *Culex* (C.) *dipseticus* Dyar & Knab, 1909c: 34 [= *pipiens pallens*]. TYPE: ♂; Coachella and Indio (Riverside Co.), California, 9 and 10 June 1906, A. N. Caudell; also Salina Cruz (Oaxaca), Acapulco (Guerrero) and La Paz (Baja California Sur), Mexico (USNM; not cited in Stone and Knight 1957a). BIONOMICS: [As for *quinquefasciatus*].

207. *Culex* (C.) *comitatus* Dyar & Knab, 1909c: 35 [= *pipiens pallens*]. TYPE: Lectotype ♂ with genitalia slide (374), National City (San Diego), California, 2-3 June 1906, H. G. Dyar and A. N. Caudell (USNM, 12201; selection of Stone and Knight 1957a: 46). BIONOMICS: [As for *quinquefasciatus*].

208. *Culex* (C.) *quinquefasciatus* Say, 1823: 10 [= ssp. of *pipiens*]. TYPE: Adult, Mississippi River [Restricted to vicinity of New Orleans (Orleans Par.), Louisiana] (NE). BIONOMICS: [Larvae in large artificial containers, contaminated pools].

209. *Culex* (C.) *pungens* Wiedemann, 1828: 9 [= *pipiens quinquefasciatus*]. TYPE: ♀, New Orleans (Orleans Par.), Louisiana (NMW). BIONOMICS: [As for *quinquefasciatus*].

210. *Culex* (C.) *ferruginosus* (Wiedemann, 1828: 12) [= *pipiens quinquefasciatus*]. TYPE: ♀, New Orleans (Orleans Par.), Louisiana (NMW). BIONOMICS: [As for *quinquefasciatus*].

211. *Culex* (C.) *restuans* Theobald, 1901b: 142. TYPE: Holotype ♀, Toronto, Ontario, June, E. M. Walker (BM). BIONOMICS: [Larvae in ground pools, treeholes and artificial containers]. Female taken on a window pane.

212. *Culex* (C.) *brehmei* Knab, 1916a: 161 [= *restuans*]. TYPE: Lectotype ♀, Newark (Essex Co.), New Jersey, 12 June 1916, H. H. Brehme (USNM, 20411; selection of Stone and Knight 1957a: 45). BIONOMICS: Larvae in cold (38°F) spring in woods.

213. Culex (C.) salinarius Coquillett, 1904b: 73. TYPE: Lectotype ♂, Elizabeth (Union Co.), New Jersey, 30 Aug 1902, J. B. Smith (USNM; selection of Stone and Knight 1957a: 56). BIONOMICS: Bred from larvae in salt marsh.

214. Culex (C.) tarsalis Coquillett, 1896a: 43. TYPE: Lectotype ♂, Argus Mts. (Inyo Co.), California, Apr 1891, A. Koebele (USNM, 904; selection of Stone and Knight 1957a: 56). BIONOMICS: [Larvae probably in springs].

215. Culex (C.) willistoni Giles, 1900: 281 [= tarsalis]. TYPE: Holotype ♀, Argus Mts. (Inyo Co.), California, Apr (LŪ). BIONOMICS: [As for tarsalis].

216. Culex (C.) kelloggii Theobald, 1903b: 211 [= tarsalis]. TYPE: 4 ♂, 5 ♀, Stanford University (Santa Clara Co.), California, Sept-Oct, Kellogg (BM). BIONOMICS: [Larvae probably in ponds, ornamental or stream-bed pools].

217. Culex (C.) thriambus Dyar, 1921a: 33. TYPE: Lectotype ♂ (Y6/1356) with genitalia slide (1356), Kerrville (Kerr Co.), Texas, 20 Aug 1920, H. G. Dyar (USNM, 23926; selection of Stone and Knight 1957a: 57). BIONOMICS: Larvae in dirty pool beside river.

218. Culex (Melanoconion) abominator Dyar & Knab, 1909b: 257. TYPE: Lectotype ♂, Plano (Collin Co.), Texas, Sept, E. S. Tucker (USNM, 12103; selection of King and Bradley 1937: 353). BIONOMICS: [Larvae in permanent pools with vegetation].

*219. Culex (Mel.) anips Dyar, 1916a: 48. TYPE: Lectotype ♂ with genitalia slide (747), San Diego (San Diego Co.), California, spring 1916, H. G. Dyar (USNM, 20304; selection of Stone and Knight 1957a: 43). BIONOMICS: Pupae found rarely in permanent pool, about 50 x 300 ft, with deep water, cat-tails and Lemna, fish, and Red-winged Blackbirds.

220. Culex (Mel.) erraticus (Dyar & Knab, 1906c: 224). TYPE: Lectotype larval skin closest to label on slide with two other larval skins, Baton Rouge (East Baton Rouge Par.), Louisiana, J. W. Dupree (USNM; selection of Stone and Knight 1957a: 49). BIONOMICS: [Larvae in grassy shallow margins of ponds, lakes, marshes and streams].

221. Culex (Mel.) egberti Dyar & Knab, 1907b: 214 [= erraticus]. TYPE: Lectotype ♀, Warner's Camp, north shore of Lake Okeechobee (Okeechobee Co.), Florida, Mar 1906, J. H. Egbert (USNM, 10876; selection of Stone and Knight 1957a: 48). BIONOMICS: [As for erraticus].

222. Culex (Mel.) peribleptus Dyar & Knab, 1918b: 181 [= erraticus]. TYPE: Lectotype ♂ on slide, Parr Shoals (Fairfield Co.), South Carolina, 18 Aug 1915, T. H. D. Griffiths (USNM, 21571; selection of Stone and Knight 1957a: 54). BIONOMICS: Larvae in "grass pond."

223. Culex (Mel.) pose Dyar & Knab, 1918b: 182 [= erraticus]. TYPE: Holotype ♀, Dallas (Dallas Co.), Texas, 11 Nov 1905, W. E. Hinds (USNM, 21572). BIONOMICS: [As for erraticus].

224. Culex (Mel.) degustator Dyar, 1921b: 39 [= erraticus]. TYPE: Lectotype ♂ with genitalia slide (1333), Scott (Pulaski Co.), Arkansas, 11 Aug 1909, J. K. Thibault (USNM, 23833; selection of Stone and Knight 1957a: 47). BIONOMICS: [As for erraticus].

225. Culex (Mel.) homoepas Dyar & Ludlow, 1921: 46 [= erraticus]. TYPE: Holotype ♂, Jackson Barracks, New Orleans (Orleans Par.), Louisiana, 16 Oct 1920, C. C. Robbins (USNM, 23942). BIONOMICS: [As for erraticus].

226. Culex (Mel.) mulrennani Basham, 1948: 1. TYPE: Holotype ♂ with associated larval and pupal skins, Big Pine Key (Monroe Co.), Florida, 26 July 1947, D. C. Thurman and E. Basham (USNM). BIONOMICS: Bred from

larvae in 3 holes in limestone, one with, and 2 without vegetation, from 1-8 ft deep and 6-18 in in diameter.

227. Culex (Mel.) peccator Dyar & Knab, 1909b: 256. TYPE: Lectotype ♂ with genitalia slide (396), Scott [Pulaski Co. not Lonoke Co.], Arkansas, 30 Sept-8 Oct 1908, J. K. Thibault (USNM, 12192; selection of Rozeboom and Komp 1950: 94). BIONOMICS: [Larvae in pools in streams and in marshy areas]. Adults in treeholes and holes in bank of bayou.

228. Culex (Mel.) incriminator Dyar & Knab, 1909b: 257 [= peccator]. TYPE: Lectotype ♂ with genitalia slide (407), Agricultural College (Oktibbeha Co.), Mississippi, 18 Aug 1905, W. V. Reed (USNM, 12105; selection of Stone and Knight 1957a: 51). BIONOMICS: [Larvae in pools in streams and in marshy areas].

229. Culex (Mochlostyrax) floridanus (Dyar & Knab, 1906b: 171) [= pilosus]. TYPE: Larvae, Estero (Lee Co.), Florida, July 1906, J. B. Van Duzee (NE). BIONOMICS: Larvae on top of algae at side wall inside of large stone tank with fish.

230. Culex (Mochl.) deceptor Dyar & Knab, 1909b: 257 [= pilosus]. TYPE: Lectotype ♂ with genitalia slide (346), Fort White (Columbia Co.), Florida, H. Byrd (USNM, 12104; selection of Stone and Knight 1957a: 47). BIONOMICS: [Larvae in permanent and semipermanent ground pools].

231. Deinocerites mathesoni Belkin & Hogue, 1959: 426. TYPE: Holotype ♂ (46, 261), Brownsville (Cameron Co.), Texas, 8-9 Feb 1940, F. W. Fisk (USNM). BIONOMICS: Bred from larvae in fiddler crab (Uca pugilator) holes.

Chaoborinae

232. Chaoborus americanus (Johannsen, 1903b: 395). TYPE: Holotype ♂ (1027-718), Lake Forest (Lake Co.), Illinois, 1900 (Cornell). BIONOMICS: [Larvae in small semipermanent or permanent ponds throughout the year].

233. Chaoborus hudsoni (Felt, 1904: 371) [= americanus]. TYPE: ♂, ♀, Poughkeepsie (Dutchess Co.), New York, June-Aug 1904 (NY). BIONOMICS: [As for americanus]. Bred from larvae.

234. Chaoborus borealis Cook, 1956b: 25. TYPE: Holotype ♂, Whitehorse, Yukon Territory, 18 May 1949, L. C. Curtis (CNC). BIONOMICS: [Larvae probably in small, semipermanent or permanent bodies of water].

235. Chaoborus albipes (Johannsen, 1903b: 398) [= flavicans]. TYPE: Holotype ♀, Ithaca (Tompkins Co.), New York, Aug 1901 (Cornell). BIONOMICS: [Larvae in water-filled road ruts, temporary ponds and small pools].

236. Chaoborus rotundifolia (Felt, 1904: 366) [= flavicans]. TYPE: Holotype ♂, Karner (Albany Co.), New York, 7 July 1904 (NY). BIONOMICS: Bred from larva in woodland pool.

237. Chaoborus eluthera Dyar & Shannon, 1924c: 211 [= flavicans]. TYPE: Lectotype ♂ with genitalia slide, Potlatch (Latah Co.), Idaho, 20 June 1908, J. M. Aldrich (USNM, 27457; PRESENT SELECTION by Alan Stone). BIONOMICS: [Probably as for albipes].

238. Sayomyia albata (Johnson, 1921a: 11). TYPE: Holotype ♂, Brookline (Norfolk Co.), Massachusetts, 18 June 1907, C. W. Johnson (? MCZ). BIONOMICS: [Larvae probably in permanent, semipermanent or temporary bodies of ground water].

239. Sayomyia annulata (Cook, 1956b: 39). TYPE: Holotype ♀, Crystal

River (Citrus Co.), Florida, 18 Sept 1950, Hudson (USNM). BIONOMICS: [Larvae probably in ponds, lakes or temporary ground pools]. Adults taken in light trap.

240. Sayomyia astictopus (Dyar & Shannon, 1924c: 214). TYPE: Holotype ♂, East Lake (Tulare Co.), California, 21 June 1883, Turner (USNM, 27458). BIONOMICS: [Larvae in lakes, ponds and temporary ground pools].

241. Sayomyia lacustris (Freeborn, 1926:161) [= astictopus]. TYPE: Holotype ♂ (1873), Lakeport (Lake Co.), California, 19 July 1925 (CAS). BIONOMICS: [Larvae in lakes, ponds and temporary ground pools].

242. Sayomyia maculipes (Stone, 1965: 231). TYPE: Holotype ♀, Hot Springs National Park (Garland Co.), Arkansas, 29 Sept 1963, B. C. Marshall (USNM, 67424). BIONOMICS: [Larvae probably in lakes, ponds or other ground pools].

*243. Sayomyia punctipennis (Say, 1823: 16). TYPE: Adult, Pennsylvania (NE). BIONOMICS: [Larvae in lakes and ponds].

244. Sayomyia appendiculata (Herrick, 1884: 11) [= punctipennis]. TYPE: Larva, pupa, Lake of the Isles, Minneapolis (Hennepin Co.), Minnesota (LU). BIONOMICS: Larvae taken from lake at night.

*245. Schadonophasma trivittata (Loew, 1862b: 186) [= nyblaei]. TYPE: ♂, Maine, Osten Sacken (MCZ). BIONOMICS: [Larvae in lakes, ponds and other still ground waters].

246. Schadonophasma knabi (Dyar, 1905b: 16) [= nyblaei]. TYPE: Holotype larva (96), Springfield (Hampden Co.), Massachusetts, F. Knab (USNM). BIONOMICS: [As for trivittata].

247. Mochlonyx cinctipes (Coquillett, 1903c: 190). TYPE: Holotype ♂, Mt. Vernon (Fairfax Co.), Virginia, Apr 1903, W. V. Warner (USNM, 6839; only specimen marked as type by Coquillett, fide Stone in litt.). BIONOMICS: [Larvae in semipermanent or temporary ponds and pools in early spring].

248. Mochlonyx obscurus (Dyar & Shannon, 1924c: 208) [= cinctipes]. TYPE: Lectotype ♂ with genitalia slide, Hoodspout (Mason Co.), Washington, 4 May 1924, H. G. Dyar (USNM, 27456; PRESENT SELECTION by Alan Stone, one of 2 specimens bearing type labels). BIONOMICS: Reared from larvae in large lake which goes dry in summer. Larvae among logs in shallow water near one end of lake, associated with Aedes cinereus.

249. Mochlonyx fuliginosus (Felt, 1905b: 458). TYPE: Holotype ♀, Nassau (Rensselaer Co.), New York, 14 May 1902 (NY). BIONOMICS: [Larvae in semipermanent or temporary ponds and pools early in the spring].

250. Mochlonyx karnerensis (Felt, 1904: 347) [= velutinus]. TYPE: Holotype ♂, Karner (Albany Co.), New York, 14 May 1902 (NY). BIONOMICS: Bred from 2 larvae in stagnant pool.

251. Mochlonyx lintneri (Felt, 1904: 353) [= velutinus]. TYPE: ♂, ♀, near Elizabethtown (Essex Co.), New York, 9 June 1904 (NY). BIONOMICS: Bred from larvae in cool mountain pool, associated with species of Aedes and Eucoarethra underwoodi.

*252. Eucoarethra underwoodi Underwood, 1903: 182. TYPE: ♂, ♀, Penobscot Co., Maine, 27 Jan 1903 (and a few days later), W. L. Underwood (LU). BIONOMICS: Bred from larvae in 2 springs in wood, 8 mi apart, one with and one without covering of ice; second spring was about 2 ft deep and 42°F at bottom.

*253. Eucoarethra americana (Johannsen, 1903b: 403) [= underwoodi]. TYPE: ♂, ♀, larva, pupa, New York State, Illinois, Minnesota, New Jersey (NY). BIONOMICS: [Larvae in small permanent or semipermanent, shaded bodies of water such as springs, pools and wells].

*254. Corethrella brakeleyi (Coquillett, 1902c: 85). TYPE: Holotype ♂, abdomen missing, Lahaway (Ocean Co.), New Jersey, 13 Aug, J. T. Brakeley and J. B. Smith (USNM, 6086; only specimen marked as type by Coquillett, fide Stone in litt, 1966). BIONOMICS: [Larvae in still ground waters, usually with dense vegetation].

255. Lutzomiops kerrvillensis Stone, 1965: 231. TYPE: Holotype ♀, Kerrville (Kerr Co.), Texas, May 1954, L. J. Bottimer (USNM, 67423). BIONOMICS: [Larvae probably in swamps or marginal vegetation of lakes and ponds].

LIST OF LOCALITIES

Canada

ALBERTA

Banff: 90. Aedes (O.) sansoni.

Edmonton: 152. Aedes (O.) albertae.

Laggan, Lake Louise: 125. Aedes (O.) acrophilus.

BRITISH COLUMBIA

Discovery Island, elev. ca. 100 ft: 71. Aedes (O.) pacificensis.

Fraser River: 182. Culiseta (C.) pinguis.

Kaslo, NW shore of Kootenay Lake, elev. 1670 ft: 124. Aedes (O.) pullatus; 143. Aedes (O.) aestivalis; 158. Aedes (O.) trichurus.

Popcum: 176. Aedes (Aedim.) euochrus.

Prince Rupert: 101. Aedes (O.) cyclocerculus; 102. Aedes (O.) leuconotips.

Yale: 110. Aedes (O.) hewitti.

MANITOBA

Aweme: 161. Aedes (O.) poliochros.

St. Boniface: 137. Aedes (O.) spencerii (also Stony Mt.).

Stony Mt.: 137. Aedes (O.) spencerii (also St. Boniface); 175. Aedes (Aedim.) sylvestris (also Rondeau Provincial Pk. and Simcoe Lake, Ont.).

Winnipeg: 133. Aedes (O.) riparius; 146. Aedes (O.) vinnipegensis (Winnipeg Beach).

NEWFOUNDLAND

Hawk's Harbor, Labrador: 103. Aedes (O.) labradorensis; 126. Aedes (O.) pearyi.

NORTHWEST TERRITORIES

Bernard Harbour: 105. Aedes (O.) nearcticus.

Fort Norman (near), Mackenzie River valley, lat. 65°: 128. Aedes (O.) punctor.

NOVA SCOTIA

Locality not specified: 87. Aedes (O.) excrucians; 130. Aedes (O.) provocans; 147. Aedes (O.) stimulans.

ONTARIO

Ottawa: 160. Aedes (O.) pagetonotum.

Rondeau Provincial Park (Kent Co.): 175. Aedes (Aedim.) sylvestris (also Simcoe Lake, Ont. and Stony Mt., Manitoba).

St. Martin [as St. Martin's Falls], Albany River, Hudson's Bay: 104. Aedes (O.) impiger; 129. Aedes (O.) implacabilis; 181. Culiseta (C.) impatiens.

Simcoe Lake (Simcoe Co.): 16. Anopheles (A.) walkeri; 65. Aedes (O.) canadensis (De Grassi Pt.); 175. Aedes (Aedim.) sylvestris (also Rondeau Provincial Park, Ont. and Stony Mt., Manitoba).

Toronto: 211. Culex (C.) restuans.

Trenton (Hastings Co.): 91. Aedes (O.) euedes.

White River (Algoma Co.): 54. Aedes (O.) centrotus; 78. Aedes (O.) denticus; 112. Aedes (O.) intrudens; 123. Aedes (O.) pionips.

QUEBEC

Great Whale River: 132. Aedes (O.) rempeli.

Rupert House: 106. Aedes (O.) implicatus.

SASKATCHEWAN

Carnduff, Assiniboia: 96. Aedes (O.) fletcheri.

Oxbow: 63. Aedes (O.) campestris.

YUKON TERRITORY

Dawson: 149. Aedes (O.) mercurator.

Whitehorse: 64. Aedes (O.) callithotrys; 234. Chaoborus borealis.

Greenland

Kangerdlugssuak, 77°23'N 67°01'W, Inglefield Gulf: 119. Aedes (O.) innuitus (may be also Locality not specified).

Locality not specified: 118. Aedes (O.) nigripes.

United States

ALASKA

Anchorage: 77. Aedes (O.) prolixus.

Fort Egbert, Eagle (Yukon River): 180. Culiseta (C.) alaskaensis.

Fort Gibbon: 73. Aedes (O.) borealis.

Unalakleet, Norton Sound: 127. Aedes (O.) punctodes.

ARIZONA

Chiricahua Mts., head of Indian Creek, south base of Cochise Head, elev. 6100 ft (Cochise Co.): 117. Aedes (O.) iridipennis.

Madera Canyon, elev. ca. 5000 ft (Santa Cruz Co.): 116. Aedes (O.) monticola.

Oak Creek Canyon, elev. 6000 ft (Coconino Co.): 187. Culiseta (C.) particeps; 194. Culex (N.) apicalis; 203. Culex (C.) affinis.

Prescott, 8 mi SE of (Yavapai Co.): 195. Culex (N.) arizonensis.

Williams (Coconino Co.): 164. Aedes (O.) varipalpus.

ARKANSAS

- Fayetteville (Washington Co.): 46. Psorophora (J.) longipalpis.
 Hot Springs National Park (Garland Co.): 242. Sayomyia maculipes.
 Scott (Pulaski Co.): 156. Aedes (O.) thibaulti; 224. Culex (Mel.) degustator; 227. Culex (Mel.) peccator.

CALIFORNIA

- Arden (Alameda Co.): 83. Aedes (O.) lativittatus.
 Argus Mts. (Inyo Co.): 185. Culiseta (C.) inornata; 214. Culex (C.) tarsalis; 215. Culex (C.) willistoni.
 Bakersfield (Kern Co.): 113. Aedes (O.) melanimon; 202. Culex (C.) badgeri.
 Benicia Barracks (Solano Co.): 140. Aedes (O.) deniedmannii.
 Central California (county not specified): 11. Anopheles (A.) boydi.
 Coachella (Riverside Co.): 206. Culex (C.) dipseticus (also Indio).
 Davis (Yolo Co.): 6. Anopheles (A.) freeborni.
 East Lake (Tulare Co.): 240. Sayomyia astictopus.
 Elkhorn Ferry, near Sacramento (Yolo Co.): 33. Orthopodomyia californica.
 Fallen Leaf, south end of Lake Tahoe (El Dorado Co.): 69. Aedes (O.) cataphylla; 74. Aedes (O.) tahoensis; 93. Aedes (O.) palustris; 94. Aedes (O.) pricei; 100. Aedes (O.) hexodontus; 107. Aedes (O.) increpitus; 165. Aedes (O.) ventrovittis.
 Gardena, Nigger Slough (Los Angeles Co.): 201. Culex (C.) erythrothorax.
 Indio (Riverside Co.): 206. Culex (C.) dipseticus (also Coachella).
 Kelseyville (near), Township 13N, Range 9W, Sections 11 and 12, elev. 1390 ft (Lake Co.): 60. Aedes (O.) bicristatus.
 Lake Center Camp (Plumas Co.): 179. Aedes (A.) hemiteleus.
 Lakeport (Lake Co.): 241. Sayomyia lacustris.
 Locality not specified: 84. Aedes (O.) quaylei; 184. Culiseta (C.) incidens.
 See also Point Reyes to San Diego.
 Monticello, 1 mi S (Napa Co.): 196. Culex (N.) reevesi Bohart.
 National City (San Diego Co.): 207. Culex (C.) comitatus.
 Pasadena (Los Angeles Co.): 204. Culex (C.) stigmatosoma.
 Point Reyes to San Diego, coast; locality not specified: 197. Culex (N.) reevesi Wirth.
 San Diego (San Diego Co.): 219. Culex (Mel.) anips. See also Sweetwater Junction.
 Stanford Univ. (Santa Clara Co.): 8. Anopheles (A.) occidentalis; 10. Anopheles (A.) franciscanus; 139. Aedes (O.) squamiger; 188. Culiseta (C.) maccrackena; 216. Culex (C.) kelloggii.
 Sweetwater Junction, near San Diego (San Diego Co.): 27. Uranotaenia anhydor.
 Tahoe Tavern, at outlet of Lake Tahoe (Placer Co.): 166. Aedes (O.) fisheri.
 Three Rivers (Tulare Co.): 135. Aedes (O.) sierrensis.

COLORADO

- Mountain Home Lake, Fort Garland, elev. 8300 ft (Costilla Co.): 114. Aedes (O.) klotsi.

CONNECTICUT

Branford (New Haven Co.): 191. Culiseta (Culicella) brittoni.

DISTRICT OF COLUMBIA

Washington: 30. Uranotaenia sapphirina (also Brooklyn, New York); 34. Orthopodomyia signifera.

FLORIDA

Alligator Creek (probably Seminole Co.): 48. Psorophora (G.) floridensis.

Big Pine Key (Monroe Co.): 226. Culex (Mel.) mulrennani.

Brevard Co., near St. John's River: 3. Anopheles (A.) bradleyi.

Crystal River (Citrus Co.): 239. Sayomyia annulata.

Estero (Lee Co.): 21. Wyeomyia (W.) antoinetta; 23. Wyeomyia (W.) vanderduzei; 229. Culex (Mochl.) floridanus.

Florida Keys (Monroe Co.): 1. Anopheles (A.) atropos. See also Big Pine and Key West.

Fort White (Columbia Co.): 230. Culex (Mochl.) deceptor.

Georgiana (Brevard Co.): 17. Toxorhynchites (L.) rutilus.

Jacksonville (Duvale Co.): 115. Aedes (O.) mitchellae.

Key West (Monroe Co.): 51. Psorophora (G.) nana; 155. Aedes (O.) keyensis (Naval Hospital).

Kissimmee (Osceola Co.): 67. Aedes (O.) mathesoni.

Lake Okeechobee (north shore), Warner's Camp (Okeechobee Co.): 221. Culex (Mel.) egberti.

Sanford (Seminole Co.): 57. Aedes (O.) atlanticus (also New Brunswick, N. J.).

GEORGIA

Locality not specified: 36. Psorophora (P.) molesta; 174. Aedes (Steg.) excitans.

Quitman, vicinity of (Brooks Co.): 7. Anopheles (A.) georgianus.

Savannah (Chatam Co.): 173. Aedes (Steg.) taeniatus.

IDAHO

Boise (Ada Co.): 81. Aedes (O.) curriei; 121. Aedes (O.) griseus (Boise Barracks).

Market Lake (Jefferson Co.): 138. Aedes (O.) idahoensis; 144. Aedes (O.) aldrichi.

Potlatch (Latah Co.): 237. Chaoborus eluthera.

ILLINOIS

Lake Forest (Lake Co.): 232. Chaoborus americanus.

Locality not specified: 253. Eucorethra americana (also Locality not specified in Minnesota, New Jersey and New York).

Rock Island Arsenal (Rock Island Co.): 170. Aedes (O.) niger.

INDIANA

Locality not specified: 43. Psorophora (J.) musica.

LOUISIANA

Baton Rouge and vicinity (East Baton Rouge Par.): 29. Uranotaenia continentalis; 31. Uranotaenia coquilletti; 86. Aedes (O.) dupreei; 111. Aedes (O.)

infirmatus; 157. Aedes (O.) tormentor; 220. Culex (Mel.) erraticus.

New Orleans and vicinity (Orleans Par.): 4. Anopheles (A.) crucians (also Locality not specified in Pennsylvania); 97. Aedes (O.) pallens; 208. Culex (C.) quinquefasciatus; 209. Culex (C.) pungens; 210. Culex (C.) ferruginosus; 225. Culex (Mel.) homoepas (Jackson Barracks).

MAINE

Locality not specified: 245. Schadonophasma trivittata.
Penobscot Co.: 252. Eucorethra underwoodi.

MARYLAND

Chestertown (Kent Co.): 12. Anopheles (A.) punctipennis.
Plummer's Island (Montgomery Co.): 2. Anopheles (A.) barberi; 167. Aedes (F.) atropalpus.

MASSACHUSETTS

Belchertown (Hampshire Co.): 79. Aedes (O.) pseudodiantaeus.
Brookline (Norfolk Co.): 238. Sayomyia albata.
Cambridge (Middlesex Co.): 177. Aedes (A.) fuscus.
Springfield (Hampden Co.): 246. Schadonophasma knabi.

MINNESOTA

Itasca State Park; along side of north boundary road, about 0.3 mi from corner west of north arm of Lake Itasca (Clearwater Co.): 59. Aedes (O.) barri.

Locality not specified: 253. Eucorethra americana (also Locality not specified in Illinois, New Jersey and New York).

Minneapolis, Lake of the Isles: 244. Sayomyia appendiculata.
St. Paul, Fort Snelling: 200. Culex (N.) frickii.

Virginia, Olcott Park, near greenhouse (St. Louis Co.): 189. Culiseta (Culicella) minnesotae.

Wabasha, vicinity of (Wabasha Co.): 14. Anopheles (A.) quadrimaculatus.

MISSISSIPPI

Agricultural College (Oktibbeha Co.): 228. Culex (Mel.) incriminator. See also Locality not specified.

Corinth (Alcorn Co.): 44. Psorophora (J.) horrida.

Electric Mills (Kemper Co.): 150. Aedes (O.) mississippii.

Locality not specified, probably vicinity of Agricultural College: 19. Toxorhynchites (L.) herrickii.

MONTANA

Bozeman (Gallatin Co.): 70. Aedes (O.) prodotes.

Drummond (Granite Co.): 95. Aedes (O.) mimesis.

Fort Keogh, near Miles City (Custer Co.): 120. Aedes (O.) nigromaculis.

Missoula (Missoula Co.): 109. Aedes (O.) mutatus.

Story Creek railway crossing (Gallatin Co.): 134. Aedes (O.) schizopinax.

NEW HAMPSHIRE

Center Harbor (Belknap Co.): 26. Mansonia (C.) ochropus; 58. Aedes (O.) aurifer; 190. Culiseta (Culicella) dyari; 193. Culiseta (Climacura) melanura.

Dublin (Cheshire Co.): 80. Aedes (O.) diantaeus.

NEW JERSEY

Chester (Morris Co.): 162. Aedes (O.) trivittatus.

Delair (Camden Co.): 50. Psorophora (G.) discolor.

Elizabeth (Union Co.): 213. Culex (C.) salinarius.

Garret Mt., Paterson (Passaic Co.): 66. Aedes (O.) nivitarsis; 163. Aedes (O.) inconspicuus; 199. Culex (N.) saxatilis.

Great Piece Meadow, probably near Chatham (Morris Co.): 142. Aedes (O.) pretans.

Hudson Co.: 151. Aedes (O.) classicus.

Lahaway (Ocean Co.): 22. Wyeomyia (W.) smithii; 254. Corethrella brak-eleyi.

Livingston Park (Middlesex Co.): 88. Aedes (O.) siphonalis; 99. Aedes (O.) sylvicola.

Locality not specified: 98. Aedes (O.) grossbecki; 253. Eucoethra americana (also Locality not specified in Illinois, Minnesota and New York).

Newark (Essex Co.): 212. Culex (C.) brehmei.

New Brunswick (Middlesex Co.): 57. Aedes (O.) atlanticus (also Sanford, Fla.).

Orange [Watchung] Mts. (Essex Co.): 178. Aedes (A.) pallidohirtus.

Summit (Union Co.): 68. Aedes (O.) cantator.

NEW MEXICO

Pecos Canyon (? San Miguel Co.): 108. Aedes (O.) vittatus.

NEW YORK

Brooklyn: 30. Uranotaenia sapphirina (also District of Columbia).

Eastern New York: 13. Anopheles (A.) hyemalis.

Elizabethtown and vicinity (Essex Co.): 53. Aedes (O.) abserratus; 72. Aedes (O.) lazarensis; 131. Aedes (O.) auroides; 183. Culiseta (C.) absobrina; 251. Mochlonyx lintneri.

Ithaca (Tompkins Co.): 32. Orthopodomyia alba; 235. Chaoborus albipes.

Karner (Albany Co.): 89. Aedes (O.) abfitchii; 92. Aedes (O.) fitchii; 236. Chaoborus rotundifolia; 250. Mochlonyx karnerensis.

Locality not specified: 159. Aedes (O.) cinereoborealis; 253. Eucoethra americana (also Locality not specified in Illinois, Minnesota and New Jersey).

See also Nassau.

Nassau (Rensselaer Co.): 148. Aedes (O.) subcantans (uncertain); 249. Mochlonyx fuliginosus.

Plattsburgh (Clinton Co.): 55. Aedes (O.) dysanor.

Poughkeepsie (Dutchess Co.): 233. Chaoborus hudsoni.

Sodus Point (Wayne Co.): 186. Culiseta (C.) magnipennis.

Syracuse, vicinity of Lake Onondaga (Onondaga Co.): 82. Aedes (O.) onondagensis.

NORTH DAKOTA

Fort Lincoln (Burleigh Co.): 85. Aedes (O.) mediolineatus.

OREGON

Crater Lake, elev. 8000 ft (Klamath Co.): 76. Aedes (O.) masamae.

PENNSYLVANIA

Camp Roosevelt, Mt. Gretna (Lebanon Co.): 9. Anopheles (A.) perplexens.

Locality not specified, probably vicinity of Philadelphia: 4. Anopheles (A.) crucians (also New Orleans, La.); 153. Aedes (O.) damnosus; 169. Aedes (F.) triseriatus; 205. Culex (C.) consobrinus; 243. Sayomyia punctipennis.

SOUTH CAROLINA

Charleston and vicinity (Charleston Co.): 24. Mansonia (C.) perturbans; 39. Psorophora (P.) conterrens; 136. Aedes (O.) sollicitans; 198. Culex (N.) territans.

Columbia, 8.2 mi SW, near Watling Road between Columbia Air Base and US Highway No. 1 (Lexington Co.): 20. Wyeomyia (W.) haynei.

Hartsville (Darlington Co.): 41. Psorophora (P.) howardii.

Parr Shoals (Fairfield Co.): 222. Culex (Mel.) peribleptus.

Ten Mile Station (Charleston Co.): 35. Psorophora (P.) ciliata; 37. Psorophora (P.) rubida; 38. Psorophora (P.) boscii.

STATE NOT SPECIFIED

See Restrictions of Type Localities, p. 2-5.

Carolina; see Ten Mile Station, South Carolina: 35. Psorophora (P.) ciliata; 37. Psorophora (P.) rubida; 38. Psorophora (P.) boscii.

Mississippi River; see New Orleans, Louisiana: 208. Culex (C.) quinquefasciatus.

North-west Territory; see Wabasha, Minnesota: 14. Anopheles (A.) quadrimaculatus.

United States: 12. Anopheles (A.) punctipennis (See Chestertown, Maryland); for all the remaining see Charleston, South Carolina: 24. Mansonia (C.) perturbans; 39. Psorophora (P.) conterrens; 136. Aedes (O.) sollicitans; 198. Culex (N.) territans.

TEXAS

Brownsville (Cameron Co.): 40. Psorophora (P.) ctitis; 42. Psorophora (J.) cyanescens; 49. Psorophora (G.) texana; 61. Aedes (O.) bimaculatus; 154. Aedes (O.) thelcter; 231. Deinocerites mathesoni.

Dallas (Dallas Co.): 223. Culex (Mel.) pose.

Harris Co.: 45. Psorophora (J.) longipalpus.

Kerrville (Kerr Co.): 145. Aedes (O.) gonimus; 171. Aedes (F.) zoosophus; 217. Culex (C.) thriambus; 255. Lutzomiops kerrvillensis.

Mission (Hidalgo Co.): 28. Uranotaenia syntheta; 172. Aedes (F.) alleni.

Plano (Collin Co.): 218. Culex (Mel.) abominator.

UTAH

Salt Lake Co.: 122. Aedes (O.) niphadopsis.

VIRGINIA

Grassymead, near Fort Hunt (Fairfax Co.): 47. Psorophora (G.) columbi-ae.

Mt. Vernon (Fairfax Co.): 247. Mochlonyx cinctipes.

Woodstock (Shenandoah Co.): 18. Toxorhynchites (L.) septentrionalis; 141. Aedes (O.) hirsuteron.

WASHINGTON

Cushman Lake (Mason Co.): 56. Aedes (O.) aloponotum.

Hoodsport (Mason Co.): 248. Mochlonyx obscurus.

Mt. Rainier National Park (Pierce Co.): 52. Aedes (O.) aboriginis (Longmire Springs); 75. Aedes (O.) altiusculus (Indian Henry's).

WISCONSIN

Jefferson Co.: 5. Anopheles (A.) earlei.

Locality not specified: 15. Anopheles (A.) annulimanus; 25. Mansonia (C.) testacea.

Saxeville (Waushara Co.): 192. Culiseta (Culicella) parodites.

WYOMING

Box Elder Creek, 19 mi W of Douglas (Converse Co.): 168. Aedes (F.) hendersoni.

Yellowstone National Park, Shoshone Point, elev. 8200 ft: 62. Aedes (O.) cacothius.

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SYSTEMATIC INDEX

The names of the 255 topotypic North American species are in roman type. They are indexed individually with reference to the appropriate genus and subgenus (where applicable), as well as classified under the latter. In the classified portions, junior synonyms, subspecies or infrasubspecies are also listed under the name of the senior synonym or valid taxonomic species as given in the catalog of the mosquitoes of the world (Stone, Knight and Starcke 1959; Stone 1961, 1963). An asterisk (*) denotes a type species of a generic group and a number sign (#) a replacement name. Extralimital senior synonyms are underscored and are listed only in the classified portion.

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- diantaeus, Aedes (O.), 11
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- dupreei, Aedes (O.), 11
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